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## **FINAL**

## **SEMI-ANNUAL PROGRESS REPORT NUMBER 22**

(Operating Period January 1 through June 30, 2006)

## **Prepared For:**

Non-City Remedial Design/Remedial Action Settlors Wayne Reclamation & Recycling, Inc., Wayne Waste Oil Site Columbia City, Indiana

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### ACRONYMS AND ABBREVIATIONS

AST Aboveground Storage Tank
B&N Burgess & Niple, Incorporated
CLP Contract Laboratory Program

DCE dichloroethene
gpd gallons per day
gpm gallons per minute

HDPE high-density polyethylene

IDEM Indiana Department of Environmental Management

InSite InSite, Incorporated

ISC-LT Industrial Source Complex – Long-Term

lb(s) pound(s)

MWH MWH Americas, Inc.

NFG National Functional Guidelines O&M operation and maintenance

OM&M operation, maintenance, and monitoring

Pace Pace Analytical Services, Inc.
PCB polychlorinated biphenyl

PCE tetrachloroethene

POTW publicly owned treatment works

ppb parts per billion

PRG Preliminary Remediation Goal
QAPjP Quality Assurance Project Plan

QC quality control

RD/RA Remedial Design/Remedial Action scfm standard cubic feet per minute

SE Southeast

SVE soil vapor extraction

U.S. EPA United States Environmental Protection Agency

TCE trichloroethene

μg/kg micrograms per kilogram
 μg/L micrograms per liter
 v/v volume per volume basis
 VOC volatile organic compound

VC vinyl chloride Weston Roy F. Weston

WRR Wayne Reclamation & Recycling

### 1.0 INTRODUCTION

This document is submitted on behalf of the Non-City Remedial Design/Remedial Action (RD/RA) Settlors. It is intended to summarize operations of the remediation system constructed by the Non-City RD/RA Settlors at the Wayne Reclamation & Recycling (WRR) Site (also known as the Wayne Waste Oil Site) located in Columbia City, Indiana for the reporting period of January 1 through June 30, 2006. Included in this document is a description of the system operation, assessment, and testing activities that have occurred during the reporting period, as well as the on-going evaluation of the remediation system performance. This document is organized as follows:

- Section 2 Monitoring, Data Validation, and Field Work
- Section 3 Soil Vapor Extraction System
- Section 4 Air Sparging System
- Section 5 Groundwater Extraction System
- Section 6 Groundwater Pre-Treatment System
- Section 7 Off-Gas Treatment System
- Section 8 Conclusions and Recommendations

This document is intended to supplement information presented in previous Semi-Annual Progress Reports.

### 1.1 BACKGROUND

Construction of the remediation system at the WRR Site took place between 1994 and January 1995. The remediation system was constructed to remove volatile organic compounds (VOCs) from soil and groundwater. The system includes:

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• A 150-gallons-per-minute (gpm) design capacity groundwater extraction system, including a 1,600-foot-long, soil-bentonite cut-off

wall (i.e., slurry wall).

• A groundwater treatment system consisting of an influent storage tank,

an air stripping tower, and a 5,800-foot-long force main that delivers

treated groundwater to the Columbia City publicly owned treatment

works (POTW).

• A 2,400-standard-cubic-feet-per-minute (scfm) soil vapor extraction

(SVE) system and a 100-scfm air sparging system (nominal rates).

• A 3,200-scfm off-gas treatment system, which was removed from

service effective June 24, 1999.

A layout for the three primary components of the remediation system, including the

groundwater recovery, SVE, and air sparging systems, are indicated on Figures 1, 2,

and 3, respectively.

A Prefinal Inspection of the remediation system was held with the United States

Environmental Protection Agency (U.S. EPA) on January 27, 1995. The Final Inspection

with the U.S. EPA was conducted on May 18, 1995. The system was operated in

startup/shakedown mode from January 1995 through September 1995, pending approval

of the Final Operation, Maintenance, and Monitoring Plan (Final OM&M Plan;

Montgomery Watson, September 1995). U.S. EPA approval of the Final OM&M Plan

was granted on September 27, 1995. In addition, U.S. EPA approval of the *Interim* 

Remedial Action Report (Montgomery Watson, August 1995) was granted on

September 29, 1995.

Roy F. Weston (Weston) of Vernon Hills, Illinois (remediation system general contractor) acted as system operator after the completion of system construction activities, from September 1995 to January 31, 1998. Weston subcontracted the majority of the OM&M activities to InSite, Incorporated (InSite) of Fort Wayne, Indiana. Montgomery Watson (system designer) was responsible for collecting air and water samples in accordance with the approved *Final OM&M Plan* during Weston's operation of the system. From February 1, 1998 until March 31, 2004, Montgomery Watson replaced Weston as the system operator and retained InSite to perform the day-to-day system operation. As of April 1, 2004, InSite was contracted directly by the Non-City RD/RA Settlors to operate, maintain, and monitor the WRR Site remediation system. MWH Americas, Inc. (MWH; formerly Montgomery Watson and Montgomery Watson Harza) continues to assist with the monitoring and optimization of system performance.

Additional information on the remediation system can be found in the following reports:

- Final Design Evaluation (Warzyn, November 19, 1993).
- Interim Remedial Action Report (Montgomery Watson, August 1995).
- Final Operation, Maintenance, and Monitoring (OM&M) Plan (Montgomery Watson, September 1995) and Addendum (Montgomery Watson, July 1999).
- Final Operations and Maintenance Quality Assurance Project Plan (O&M QAPjP) (Montgomery Watson, September 1995) and Addendum (Montgomery Watson, July 1999).
- Technical Memorandum Number One (Montgomery Watson, February 12, 1996).
- Technical Memorandum Number Two (Montgomery Watson, November 1996).
- Semi-Annual Progress Report Number 3 (Montgomery Watson, August 1997).
- Semi-Annual Progress Report Number 4 (Montgomery Watson, November 1997).

- Semi-Annual Progress Report Number 5 (Montgomery Watson, April 1998).
- Semi-Annual Progress Report Number 6 (Montgomery Watson, September 1998).
- Semi-Annual Progress Report Number 7 (Montgomery Watson, March 1999).
- Semi-Annual Progress Report Number 8 (Montgomery Watson, August 1999).
- Semi-Annual Progress Report Number 9 (Montgomery Watson, March 2000).
- Semi-Annual Progress Report Number 10 (Montgomery Watson, October 2000).
- Semi-Annual Progress Report Number 11 (Montgomery Watson, March 2001).
- Semi-Annual Progress Report Number 12 (Montgomery Watson Harza, September 2001).
- Semi-Annual Progress Report Number 13 (MWH, April 2002).
- Semi-Annual Progress Report Number 14 (MWH, September 2002).
- Semi-Annual Progress Report Number 15 (MWH, July 2003).
- Hydrological Assessment Letter Report, January through July 2003 (MWH, August 2003).
- Semi-Annual Progress Report Number 16 (MWH, September 2003).
- Hydrological Assessment Letter Report, July through December 2003 (MWH, January 2004).
- Semi-Annual Progress Report Number 17 (MWH, March 2004).
- Semi-Annual Progress Report Number 18 (MWH, September 2004).
- Semi-Annual Progress Report Number 19 (MWH, March 2005).
- Semi-Annual Progress Report Number 20 (MWH, September 2005).
- Semi-Annual Progress Report Number 21 (MWH, February 2006).

## 2.0 MONITORING, DATA VALIDATION, AND FIELD WORK

Initial monitoring and optimization testing of the WRR Site remediation system commenced in early 1995, during the startup/shakedown mode of system operations. Additional monitoring and system optimization has continued through the year 2006. Monitoring and testing was conducted primarily to evaluate the performance of the remediation system in removing VOCs from soils and groundwater, as well as to address the monitoring and testing requirements set forth in the *Final OM&M Plan*. Summaries of the monitoring activities conducted, data validation report, and significant field events and activities are presented in the following sections.

## 2.1 SITE-SPECIFIC PRELIMINARY REMEDIATION GOALS

Development of the groundwater and soil site-specific Preliminary Remediation Goals (PRGs) are detailed in Appendix C of the Final OM&M Plan (Montgomery Watson. September 1995) and Final O&M QAPjP (Montgomery September 1995). Soil PRGs are specified based on the thickness of soil column and area. Soil compliance monitoring will begin when it is determined that an area likely meets the soil site-specific PRGs, as indicated by groundwater detections less than the groundwater site-specific PRGs. The five constituents listed in the following table were noted in the Final OM&M Plan to be the principal contaminants of concern necessitating groundwater and soil remediation at the WRR Site. The table also lists the most conservative groundwater PRGs and soil PRGs for the entire soil column for the principal contaminants of concern.

		Soil PRG for Entire Soil Column (1) (µg						
Principal Contaminant of Concern	Groundwater PRG (µg/L)	SE Area - North	SE Area - South	AST Area	MW-7S			
Vinyl Chloride (VC)	0.0283	37.1	25.2	2.6	1,987.0			
Tetrachloroethene (PCE)	1.43	67.1	1,811.6	44.2	4,796.0			
Trichloroethene (TCE)	2.54	19.7	804.6	17.6	664			
cis-1,2-Dichloroethene (cis-1,2-DCE)	70							
trans-1,2-Dichloroethene (trans-1,2-DCE)	100							
1,2-Dichloroethene, Total (1,2-DCE)		186.3	8,578.4	184.7	4,219.0			

## Notes:

 $\mu g/L = Micrograms per liter.$ 

μg/kg = Micrograms per kilogram.

SE = Southeast.

AST = Aboveground Storage Tank.

-- = No PRG developed for this constituent.

### 2.2 MONITORING

The primary monitoring activities conducted for the WRR Site remediation system include:

• The SVE system effluent (equivalent to the former air treatment system influent) samples are collected and analyzed for VOCs on a monthly basis. Laboratory analytical results of the SVE effluent sampling are used in air dispersion calculations as part of the on-going assessment of cumulative risks for exposure to carcinogens. SVE sampling activities were temporarily discontinued as of November 13, 2005, following temporary suspension of the SVE (and AS) system. The suspension was performed to assess the current effect the SVE system has on the removal of VOCs from the vadose zone. The SVE system was restarted in April 2006.

<sup>(1) =</sup> PRGs were also developed for a one-foot soil column. The appropriate PRG should be used.

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- Samples of both the influent to and effluent from the groundwater treatment system are collected monthly and analyzed for VOCs. The effluent samples are also analyzed for total metals, inorganics, and polychlorinated biphenyls (PCBs) during the expanded sampling event in October of each year. Laboratory analytical results from the groundwater treatment system sampling are used to monitor groundwater treatment system efficiency, and to provide effluent water quality information to the Columbia City POTW. During this reporting period, an expanded sampling event was not conducted.
- Groundwater samples from recovery wells are collected and analyzed for VOCs on a periodic basis. In an agreement with the U.S. EPA and Indiana Department of Environmental Management (IDEM) on October 31, 2003, recovery wells RW-1, RW-3, RW-4, and RW-5 are to be sampled for VOCs annually for three years, during or near the time of the October sampling event. Laboratory analytical results from recovery well sampling are used to monitor changes in aquifer groundwater concentrations and to assess VOC mass removal rates from the aquifer. No samples were collected from the recovery wells during this reporting period.
- Semi-annual groundwater sampling and analyses are conducted using the WRR Site monitoring well network. Typically, the semi-annual sampling is conducted in April and October of each year. Samples are analyzed for VOCs and metals. Laboratory analytical results from groundwater sampling are used to assess effectiveness of the remediation system operations and evaluate the progress toward attainment of remedial goals. During April 2006, samples were

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collected from five WRR Site monitoring wells and analyzed for

VOCs and metals.

• Semi-annual groundwater elevation measurements are collected from

28 of the WRR Site's groundwater monitoring wells and piezometers,

not including the landfill wells monitored by Columbia City and the

ten WRR Site recovery wells. Typically, the semi-annual sampling is

conducted in April and October of each year. These data are used to

evaluate groundwater flow patterns across the site. During April 2006,

groundwater elevation readings were collected from the designated

monitoring wells and piezometers.

• Monthly groundwater elevation measurements are collected from

eight groundwater monitoring wells to evaluate the zone of hydraulic

influence created by the groundwater remediation system and to assess

horizontal and vertical hydraulic gradients within the SE Area.

• Annually, specific Columbia City municipal drinking water wells

(Municipal Well Numbers 7 and 8 [referred to as PW-7 and PW-8,

respectively]) are sampled during the expanded October sampling

event; therefore, they were not sampled during this reporting period.

During this reporting period, groundwater wells located on or adjacent

to the landfill (GM-1 through GM-4) were sampled by Burgess &

Niple, Incorporated (B&N) of Columbus, Ohio. Their report

(Appendix A) provides useful data for comparison to groundwater

monitoring results from closely associated wells on the WRR Site.

The results from the above monitoring activities are discussed in the following sections of

this report.

## 2.3 DATA VALIDATION SUMMARY

Groundwater, air, and associated quality control (QC) samples were collected from the Wayne Reclamation & Recycling Site in Columbia City, Indiana between January and June 2006. The water samples were analyzed by Pace Analytical Services, Inc. (Pace) of Indianapolis, Indiana for one or more of the following parameters: volatile organic compounds (VOCs) by United States Environmental Protection Agency (U.S. EPA) Method SW-846 8260B; dissolved metals (arsenic, barium, cadmium, chromium, lead, nickel, and zinc) by U.S. EPA Method SW-846 6010B; and total cyanide by U.S. EPA Method 335.3. Additionally, air samples were analyzed for VOCs by Pace of Minneapolis, Minnesota by U.S. EPA Method TO-14.

Laboratory analytical results were evaluated in accordance with the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic Data Review (October 1999), U.S. EPA CLP NFG for Inorganic Data Review (October 2004), and the analytical methods. The analytical data were reviewed and qualified based on the results of the data evaluation parameters and/or the QC sample results provided by the laboratory. The complete data validation report is included as Appendix B. The analytical data for those compounds that did not meet the QC criteria were flagged by a "J" (estimated) or "U" (non-detect). Based on the results of this data validation, all data are considered valid and complete as qualified.

## 2.4 FIELD WORK

The major field activities conducted at the WRR Site during the reporting period are summarized in Appendix C. Activities during this reporting period included various equipment repairs and maintenance tasks.

### 3.0 SOIL VAPOR EXTRACTION SYSTEM

### 3.1 SYSTEM DESCRIPTION

The SVE system was constructed to remove VOCs from the vadose (unsaturated) zone. The horizontal configuration of the SVE well system is presented on Figure 2. The system consists of 41 SVE wells in the SE Area and 18 SVE wells in AST Area. In the SE Area of the WRR Site, the SVE wells are grouped together into one of six branch lines, with six to eight SVE wells attached to each line. As shown on Figure 2, the six branch lines are designated as Branches A, B, C, D, E, and F. The six branch lines connect to one main trunk line that conveys extracted vapors to the on-site treatment building via vacuum blowers housed within the building. Operation of groups of SVE wells is currently controlled manually by a valve at the head of each branch line. In the AST Area, each SVE well is connected via underground piping to one of two branch lines (Branches G and H; Figure 2) that convey extracted vapors to the treatment building. Automatic control valves located in the treatment building control operation of the two AST Area branches. Additionally, the operation of individual SVE wells can be controlled manually by a shut-off valve located at each well.

In the SE and AST Areas, cycling of the SVE branch lines began on May 1, 1998. The cycling applies vacuum to certain branch lines while others are dormant. After a specified period of time, the dormant lines are placed under vacuum while those that were active are turned off. During current cycling procedures, effective as of September 17, 2001, two of the six branch lines are operated simultaneously in the SE Area. The set of two branch lines operating is rotated approximately once per week. In the AST Area, operations of Branch Lines G and H were rotated approximately once per week. In the beginning of October 2002, the operation of Branch H was suspended. The SVE (and AS) system was temporarily suspended as of November 13, 2005 to assess the current effect the SVE system has on removal of VOCs from the vadose zone. The system was restarted in April 2006.

### 3.2 MONITORING RESULTS

Results of the SVE system monitoring conducted during this reporting period indicate:

- During the period of January 1 2006, through June 30, 2006, the SVE system was operational for approximately 99.5 percent of the time (i.e., percent of total hours available). Downtime events were related to standard, regularly scheduled OM&M activities and special maintenance and repairs. The SVE system was temporarily suspended from November 2005 until April 2006.
- Area air flow rates were collected each month from April through June 2006. The SE Area flow rate averaged approximately 1,020 scfm (total average of six branch line measurements made in SE Area) and the AST Area flow rate averaged approximately 213 scfm (Branch Line G). Flow rate measurements collected during this reporting period are summarized in Table 1.
- Laboratory analytical data from Summa canister samples collected in April and May 2006, as well as historical data, are summarized in Table 2. Vapor samples are collected with and without air delivery to the sparge wells as a means of measuring the contribution of the air sparge system to VOC removal.

## 3.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary objective of the SVE system operation is to remove VOCs from soil in order to attain vadose zone soil site-specific PRGs, as indicated in the *Final OM&M Plan* and *Final O&M QAPjP*. Soil compliance monitoring will begin when it is determined that an area likely meets the soil site-specific PRGs, as indicated by groundwater detections less than the groundwater site-specific PRGs.

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Based on laboratory analytical results from SVE system effluent air samples collected

during the reporting period, it is estimated that approximately 11,901 pounds (lbs) of

VOCs have been removed via the SVE system from vadose zone soils to date, with 62 lbs

removed from January through June 2006. The main VOC constituents being removed in

the SE and AST Areas are TCE and cis-1,2-DCE. Initial mass removal rates observed at

the commencement of SVE system operations were approximately 83 lbs of total VOCs

per day. As of June 2006, removal rates for the SVE system were approximately 0.34 lbs

of total VOCs per day, approximately 0.4 percent of initial removal rates. The trend in

VOC concentrations for the combined effluent air of the SVE, air sparge, and

groundwater treatment systems is stable and is shown on Figure 4. A similar trend can be

observed on Figure 5, which graphically presents total VOCs (ppb) with time for the SVE

system with and without the air sparge wells operating.

Groundwater monitoring results are presented in Table 3. For the wells that were

monitored in April 2006 within the SE Area, the following observations were made:

• Cis-1,2-DCE and VC concentrations were greater than PRGs at

MW-10S, but were about three times less than concentrations observed

in October 2005, but similar to the results from April 2005.

For MW-83AS, cis-1,2-DCE and VC concentrations exceeded PRGs.

VOC concentrations were similar to the concentrations observed during

the previous sampling event (October 2005).

For the wells that were monitored in April 2006 within the AST Area:

- VOC concentrations were less than site-specific PRGs in MW-14S. Only 1,1-dichloroethane and 1,1,1-trichloroethane were detected.
- The concentrations for five VOCs (including cis-1,2-DCE, VC, TCE, and PCE) were greater than PRGs in MW-9S, but were less than the concentrations observed during the previous sampling event (October 2005).

Constituents in groundwater are still present at concentrations greater than site-specific PRGs, and the SVE system typically removes VOCs at approximately 0.5 percent of initial removal rates. This trend has been stable for approximately 7 years (Figure 4). Operation of the system was suspended on November 13, 2005 and was restarted in April 2006. This non-operational period did not result in significant changes in VOC concentrations observed in the vapor samples (i.e., the Summa can sample results for April and May 2006 were consistent with the historical data).

#### 4.0 AIR SPARGING SYSTEM

### 4.1 SYSTEM DESCRIPTION

The air sparging system was constructed to facilitate removal of VOCs from soils and groundwater. The air sparging system is intended to work in combination with the SVE and groundwater collection systems to remove VOCs from the subsurface. The system consists of 40 sparge well clusters located in the SE Area of the WRR Site (Figure 3). A sparge well cluster is positioned adjacent to each SVE well. Compressed air is delivered from the treatment building to each sparge well through 2-inch diameter subgrade high-density polyethylene (HDPE) piping. As shown on Figure 3, Branch Lines A, B, C, D, E, and F leave the trunk line to feed the sparge wells. Operation of each branch line is controlled by a valve at the junction of the line with the primary air flow pipe.

Each sparge well cluster consists of one shallow and one deep well. The shallow/deep cluster was installed to provide treatment of soils above and below a thin clay layer located approximately 20 to 25 feet below the ground surface. The screen interval for each shallow sparge well is positioned immediately above the thin clay layer. The deep sparge wells are screened at the base of the upper aquifer. Each well is instrumented with an air flow rotometer, ball valve, and pressure gauge.

Effective September 17, 2001, delivery of compressed air to the deep sparge wells was discontinued. It is believed that the deep area is experiencing anaerobic degradation of VOC impacts; therefore, discontinuing the deep air sparging (which adds oxygen to the groundwater) may increase VOC degradation.

Typically, two of the six sparge branch lines are operated at a time, corresponding to the two operating SVE branch lines. The lines are rotated approximately once per week, consistent with the rotation of the SVE lines, with two lines undergoing sparging while four lines are dormant. During operation, air is delivered to the sparging system for four hours, followed by a four-hour period of in-operation. On November 13, 2005, the

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air sparging system (and the SVE system) was suspended to evaluate the current effect

the SVE system has on VOC removal from the vadose zone. The system was restarted in

April 2006.

4.2 MONITORING RESULTS

Results of the air sparging system monitoring conducted during this reporting period

indicate:

• The system operation was suspended from November 13, 2005 through

April 2006. During the period of April through June 2006, the air

sparging system was operational for approximately 99.5 percent of the

total hours available. Downtime events were primarily related to

standard, regularly scheduled OM&M activities and special

maintenance and repairs.

• As a means of measuring the contribution of VOC removal by air

sparging, vapor samples were collected from the effluent of the SVE

system both with and without air delivery to the sparge wells. Vapor

samples were collected using Summa canisters during the April 2006

semi-annual sampling event. Samples were also collected in May

2006. The results associated with this sampling effort are summarized

in Table 2.

• Operation of the sparge system will continue without air sparging to

the deep wells, to enable additional data to be gathered regarding

anaerobic VOC degradation.

4.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary remedial objective of the air sparging system is the removal of

dissolved-phase VOCs from the saturated zone in the SE Area of the WRR Site, located

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within the confines of the slurry wall. VOC analytical results for the air samples

collected semi-annually via Summa canisters are presented in Table 2, and semi-annual

groundwater sampling results are presented in Table 3.

A historical representation of the concentration of total VOCs in the SE Area, as recorded

during vapor sampling, is provided in Figure 5. The graph depicts the effect of the air

sparge system on VOC removal in this area. Review of the laboratory analytical results

indicate that the air sparge system's impact on VOC removal in the SE Area has varied

throughout system operations, and that for recent sample the air sparge system has had no

affect on VOC removal. The overall trend for the concentration of VOCs removed has

become stable.

For the wells that monitor the SE Area, the groundwater data is briefly summarized under

Section 3.3.

Similar to the SVE system, the VOC removal rate for the air sparge system has decreased

significantly over time, and the trend has been stable for approximately three years

(Figure 5). The air sparge system was temporarily suspended from November 2005

through April 2006 to evaluate its effectiveness. This non-operational period did not

result in significant changes in VOC concentrations observed in the vapor samples (i.e.,

the Summa can sample results for April and May 2006 were consistent with the historical

data).

### 5.0 GROUNDWATER EXTRACTION SYSTEM

### 5.1 SYSTEM DESCRIPTION

The groundwater extraction system was constructed to capture and control groundwater impacted with VOCs. The groundwater extraction system consists of ten groundwater recovery wells installed in three areas of the WRR Site as follows: three recovery wells in the AST Area (RW-1 through RW-3), one recovery well in the monitoring well MW-7S area (RW-4), and six recovery wells in the SE Area (RW-5 through RW-10) (Figure 1). The extraction system also employs the use of a soil-bentonite cut-off wall (i.e., a slurry wall), constructed to reduce the pumping rate necessary to control groundwater flow in the SE Area. Extracted groundwater is pumped to the on-site treatment building through underground HDPE piping.

### 5.2 MONITORING RESULTS

Results of the groundwater extraction system monitoring conducted during this reporting period indicate:

- During the period of January through June 2006, the groundwater extraction system was operational for approximately 99.5 percent of the time (i.e., percent of total hours available). Primary downtime events were related to routine cleaning of recovery pumps, routine and annual plant maintenance, draining and cleaning of the knockout tank, cleaning and repair of the flow meters, and other special maintenance and repairs.
- A summary of system flow rates is included in Table 4. The maximum sustained groundwater recovery rate during the reporting period was approximately 93 gpm in April 2006. During the reporting period, a total of 17,730,800 gallons of groundwater were recovered and treated. The largest total monthly flow was reported at 4,020,600 gallons, for

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the month of April 2006. The highest average daily recovery rate during the reporting period was 156,400 gallons per day (gpd), which was also reported during the month of April 2006. Figure 6 is a summary of the cumulative and average daily groundwater recovery rates. As of June 2006, a cumulative total of 279,603,500 gallons of groundwater had been recovered, treated, and discharged to the Columbia City POTW.

- On-going, routine operation and maintenance activities are focusing on recovery well pump cleaning and/or repair, and recovery pipe cleaning as necessary to optimize groundwater extraction system performance.
- water level elevation data collected during the reporting period is used to evaluate the groundwater table drawdown. These data are provided in Table 6 (monitoring well construction details are included in Table 5). Groundwater contour maps for January through June are presented as Figures 8-1 through 8-4, 8-6, and 8-7. Because groundwater elevations were measured in all wells in April, Figure 8-4 illustrates a representation of the groundwater elevations observed across the entire WRR Site. The influence of the recovery wells in the southeast corner is apparent, and the general groundwater flow direction across the property is southeast. April 2006 groundwater elevations of the landfill wells in the B&N report (see Table 2 of the B&N report, included as Appendix A) also indicated a southeastern groundwater flow direction.
- Figure 8-5 summarizes recent groundwater sampling analytical results from monitoring wells, recovery wells, and the treatment system influent.

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• Historical laboratory analytical results from the annual sampling of the

Columbia City municipal drinking water wells located to the north of

the WRR Site can be found in Tables 7 and 8. Sampling of the

municipal drinking water wells was not conducted during this

reporting period. The historical data indicates that no detectable

concentrations of constituents attributable to the WRR Site have been

identified in samples from the municipal wells.

5.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary remedial objective of the groundwater extraction system are to remove

dissolved-phase contamination from the upper aquifer on site, thereby restricting the

potential off-site migration of dissolved-phase constituents to the Blue River or Columbia

City municipal well field. Mass removal rates from the groundwater extraction system

ranged from approximately 0.70 to 2.27 lbs of total VOCs removed per day during this

reporting period.

Groundwater elevation data indicates that the slurry wall/groundwater extraction system

is effectively maintaining an inward horizontal gradient in the SE Area. Monthly water

elevations collected during the reporting period indicate the hydraulic head levels are

consistently lower inside the slurry wall as compared to the head levels outside the wall.

For example, the June 2006 elevations within the confines of the slurry wall are 3.7 feet

lower than water elevations immediately outside the slurry wall (based on monitoring

wells MW-11S and MW-13S, Table 6 and Figure 8-7).

OM&M activities, including on-going recovery pump cleaning, are conducted to increase

groundwater system recovery rates to maintain an upward gradient in the SE Area. Based

on the historical observations of groundwater extraction system performance,

maintenance of the groundwater extraction system will be conducted frequently (i.e.,

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approximately once per quarter) in order to maintain hydraulic control. Review of the

groundwater elevation data indicates that an upward gradient was maintained in the SE

Area during this reporting period.

The monitoring wells currently included in the semi-annual or annual sampling program,

per the requirements of the Final OM&M Plan, are MW-1D, MW-3S, MW-4S, MW-7S,

MW-9S, MW-10S, MW-11S, MW-14S, MW-15S, MW-16S, MW-83AS, MW-83AD,

and MW-83B. Monitoring wells MW-13S and MW-83DS were added to the annual

OM&M monitoring program per the July 11, 2002 Site Progress Meeting. During the

reporting period, monitoring wells MW-4S, MW-9S, MW-10S, MW-14S, and

MW-83AS were sampled.

A summary of monitoring well VOC and metals analytical data collected to date is

included in Table 3. Recent monitoring well VOC analytical results are also included in

Figure 8-5. Copies of laboratory analytical reports are available upon request. Results

for the monitoring wells in the SE and AST Areas are discussed in Section 3.3 and 4.3, as

part of the assessment of the SVE and air sparge systems. For the remaining wells, for

which the remedy is only groundwater treatment, the results are summarized below:

Recovery Well RW-4 Area:

• In April 2006, the VC concentration in MW-4S was greater than the

PRG, with relatively stable concentrations.

Recovery Wells in AST Area:

• In April 2006, concentrations of VOCs at MW-9S decreased by an

order of magnitude compared with the data obtained in October 2005.

• In April 2006, VOC concentrations were less than PRGs at MW-14S.

## Recovery Wells in Southeast Area

 The concentrations of VOCs at the monitoring wells (MW-10S, and MW-83AS) are generally stable compared with the results from recent years.

A summary of historical recovery well VOC analytical data is included in Table 9 (recovery well construction details are included as Table 10), with the most recent analytical data for each recovery well included on Figure 8-5. The most highly impacted groundwater was historically being removed from recovery wells located within the confines of the slurry wall (RW-8, RW-9, and RW-10).

### 6.0 GROUNDWATER PRE-TREATMENT SYSTEM

### 6.1 SYSTEM DESCRIPTION

The groundwater pre-treatment system is designed to remove VOCs from extracted groundwater, prior to discharge to the Columbia City POTW. Groundwater extracted from the WRR Site's ten groundwater recovery wells is initially pumped to an influent storage tank for solids settling and equalization. The equalized water is transferred through a bag filter to the top of an air stripping tower via electric transfer pumps. Water cascades downward through the tower packing, while air flows upward from near the tower base, inducing liquid-to-gas mass transfer of VOCs from the groundwater. The treated water drains from the tower into an effluent sump, which is pumped via a dedicated force main to the Columbia City POTW.

## 6.2 MONITORING RESULTS

During the period of January through June 2006, the groundwater pretreatment system was operational 99.5 percent of the time (i.e., percent of total hours of available). Primary downtime events were related to on-going routine cleaning activities and maintenance, and special maintenance and repairs.

Monthly analytical results of groundwater influent and treated effluent are summarized in Tables 11 and 12 and Figure 7. The air stripping tower has consistently removed VOCs prior to discharge to the Columbia City POTW. Total VOC concentrations in air stripping tower influent have fluctuated from as low as 416 µg/L to as high as 3,274 µg/L (in December 1995 and February 1996, respectively), since commencement of treatment system operations. Influent groundwater VOC concentrations can vary over time, based on a variety of factors including recovery well cycling, rainfall events, and water levels. The influent groundwater total VOC concentrations during this reporting period began at 2,308 µg/L in January 2006 and ended at 922 µg/L in June 2006 (shown in Table 11 and summarized on Figure 7). The average total VOC concentration removed during the

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reporting period was approximately 1,840  $\mu$ g/L. Average groundwater contaminant mass removal rates since the commencement of remediation system operations have ranged from approximately 0.13 to 13.2 lbs per day of total VOCs. For this reporting period, the average groundwater contaminant mass removal rate is 1.5 lbs of total VOCs per day, based on an average flow rate of 96,210 gpd and an average total VOC concentration removed of 1,840  $\mu$ g/L. The mass removal rates for specific VOCs are provided in Table 15. The total mass removed during this period is approximately 271 lbs, and the total to date is an estimated 2,896 lbs.

## 6.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

Laboratory analytical results of the groundwater treatment system monthly effluent sampling, conducted in accordance with the discharge agreement (i.e., the agreement in place prior to February 1, 1998) with the Columbia City POTW, are included in Tables 11 and 12. Analytical results have indicated that low levels of both VOCs and inorganic compounds are present in the treated groundwater discharged to the Columbia City POTW. Monthly groundwater treatment system sampling consists of influent and effluent sampling for VOCs. Additional non-VOC parameters are analyzed in samples collected during the annual sampling event conducted in October of each year (Table 12).

### 7.0 OFF-GAS TREATMENT SYSTEM

### 7.1 SYSTEM DESCRIPTION

The off-gas treatment system was constructed and operated to remove VOCs from the off-gases of the air stripping tower and the SVE system prior to discharge to the atmosphere. On June 24, 1999, air treatment was discontinued; however, monthly air sampling continues to be conducted on the effluent air stream as a means of monitoring potential risk levels associated with the untreated air stream.

Upon entering the treatment building, the combined air stream of the air stripping tower and the SVE system is drawn through an air filter and moisture separator by two blowers connected in parallel. After exiting the blowers, the air stream passes through a heat exchanger prior to discharge to the atmosphere.

## 7.2 MONITORING RESULTS

Monitoring conducted to date, including the monthly SVE system effluent sampling (which includes air stripping system off-gases), indicate the following:

• Monthly effluent vapor concentrations have decreased by more than one order-of-magnitude from the beginning of system operations in early 1995 to June 2006 (see Table 13). Total VOCs in the air stream have dropped from approximately 83,300 parts per billion (ppb) on a volume per volume basis (v/v) in March 1995 to 1,740 ppb (v/v) in June 2006. During the same time period, VC concentrations have decreased from approximately 1,900 ppb (v/v) to 168 ppb (v/v), TCE concentrations have decreased from 28,000 to 313 ppb (v/v), and cis-1,2-DCE concentrations have decreased from approximately 40,000 to 1,160 ppb (v/v). The historical monthly air treatment system influent and effluent laboratory analytical results are summarized on

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Table 13 and on Figure 4. Table 13 also includes the monthly effluent-only sample results collected since the air treatment system was discontinued on June 24, 1999.

• Calculations were conducted using the VOC concentrations of off-gas vapor concentrations to assess hypothetical risk levels. Results of the effluent sample analyses indicate hypothetical risk levels to be less than the cumulative risk action level of  $1x10^{-6}$  (representing a risk of one in one million exposed) during this reporting period. Current and historical air risk calculations are provided in Table 14 and the results for this reporting period are also reported on Table 13.

### 7.3 PROGRESS TOWARD REMEDIAL OBJECTIVES

The primary objective of the continued on-going off-gas air monitoring is to ensure that the cumulative life-time cancer risk at the WRR Site boundary remains less than the cumulative risk action level of 1x10<sup>-6</sup>. To verify compliance with this objective, air dispersion calculations were completed to estimate the maximum concentrations at receptor locations outside the site boundary. The Industrial Source Complex - Long-Term (ISC-LT) model was used for the purpose of modeling the dispersion of the effluent from the soil remediation system (Appendix D). The maximum concentrations determined by the air modeling study were multiplied by unit risk factors to estimate the excess carcinogenic risk posed by the hypothetical emissions through the inhalation route. The unit risk factors used in this study were developed from toxicity values included in U.S. EPA's Integrated Risk Information System, U.S. EPA's Health Assessment Summary Tables (Annual FY-1995), and information provided by the U.S. EPA Environmental Criteria Assessment Office. The unit risk factors conservatively assume a chronic exposure to the chemicals for 24 hours a day, 365 days a year, for a 70-year lifetime. In this Progress Report, references to cancer risk and cancer

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risk estimates refer to the estimated potential risks as indicated by the use of ISC-LT air

dispersion modeling and are not meant to represent or suggest actual risks.

Air dispersion calculations using the off-gas air data indicate that the  $1x10^{-6}$  action level

was not exceeded during this reporting period. Though active air treatment was

discontinued on June 24, 1999, monthly effluent air sampling and risk calculations will

continue. Air treatment will be reactivated should the results from two consecutive

monthly air samples indicate cumulative risks in excess of 1x10<sup>-6</sup>.

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8.0 CONCLUSIONS AND RECOMMENDATIONS

Overall remediation system mass removal calculations indicate that, since inception of

treatment system operations, approximately 14,767 lbs of total VOCs have been removed

by the SVE and groundwater treatment systems (see Figure 10). Of this, approximately

81 percent (or 11,901 lbs) is attributed to operation of the SVE and air sparge systems,

and approximately 19 percent (or 2,896 lbs) is attributed to the groundwater extraction

system.

As shown on Figure 9 (which illustrates VOC removal rates in lbs/day since 1995), initial

contaminant mass removal rates from the entire remediation system were approximately

88 lbs of total VOCs per day during the startup phase of system operations. This removal

rate has decreased to approximately 1.85 lbs of total VOCs per day, as of this reporting

period.

The following recommendations, unless otherwise indicated by the U.S. EPA, will be

implemented to improve treatment system performance:

Continue with the on-going standard OM&M of the remediation

system components to continue progress toward achieving the

remedial action objectives.

• Continue monthly groundwater treatment system influent and effluent

sampling for VOCs, per the discharge agreement with the Columbia

City POTW.

Continue with the on-going recovery well cleaning, pump repair and/or

replacement, and groundwater recovery pipe cleaning as needed to

optimize groundwater recovery efficiency and maintain effective

hydraulic control. Also, perform annual cleaning of the discharge line

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to the POTW.

The mass of VOCs being removed by the air sparge/SVE system (SE Area) and the SVE system (AST Area) has declined and stabilized. Currently, each system is removing less than 0.3 pounds of VOCs per day, providing marginal benefit to the remedial objectives. For the SE Area, it is recommended that the air sparge/SVE system be suspended while the groundwater extraction system continues to operate. Although the mass of VOCs removed by the groundwater extraction system has also declined, the system is removing 1 to 2 pounds of VOCs per day, and is maintaining hydraulic control within the slurry wall. For the AST Area, it is recommended that the additional capacity offered by suspending the air sparge/SVE system (SE Area) be used to increase air flow and/or vacuum in the AST Area (Branch Line G). This may provide additional benefit in terms of mass removal of VOCs in the AST area.

MJK/BT

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**TABLES** 

Table 1
Summary of Soil Vapor Extraction Air Flow Rates from the SE and AST Areas
January through June 2006
Wayne Reclamation & Recycling

	AIR FLOW (scfm)							
DATE TESTED	SOUTHEAST AREA	AST AREA						
1/9/2006*	0	0						
2/10/2006*	0	0						
3/15/2006*	0	0						
4/26/2006	760	170						
5/23/2006	1,300	220						
6/15/2006	1,000	250						
AVERAGE FLOW:	1,020	213						
MAXIMUM FLOW:	1,300	250						
MINIMUM FLOW:	0	0						

#### Notes:

AST = Aboveground Storage Tank.

Flow measurement reported in standard cubic feet per minute (scfm).

All flow measurements are approximate.

Vacuum and flow measurements at the individual soil vapor extraction wells were suspended as of October 2002.

The operation of Branch Line H in the AST Area was suspended in October 2002.

The soil vapor extration (SVE) and air sparge (AS) systems were temporarily suspended on November 13, 2005 for assessment of the vadose zone and restarted in April 2006.

Average flow is for operating months only.

Table 2
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	SOUTHEAST AREA													
		BRANCHES A - F												
Ţ	AS-ON	AS-ON	AS-ON	AS-ON	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF
CONSTITUENT (ppb[v/v])	1/9/1996	2/15/1996	2/16/1996	2/18/1996	11/25/1996	11/27/1996	9/3/1997	9/5/1997	11/18/1997	11/21/1997	4/21/1998 *	4/28/1998	10/14/1998	10/16/1998
1,1-Dichloroethane	230	230	300	180	120	81	88	82	98	92	20	19	70	73
cis-1,2-Dichloroethene	9,600	6,800	6,600	6,400	5,300	3,700	2,900	3,000	4,400	4,300	830	1,000	3,300	3,500
trans-1,2-Dichloroethene	850	460	540	480	490	340	370	380	460	460	71	74	280	360
4-Ethyltoluene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	<12	<12	<25	<25
Tetrachloroethene	670	470	470	470	450	370	370	370	240	220	56	100	450	270
1.1.1-Trichloroethane	1,300	810	770	700	520	340	280	290	270	290	47	51	280	190
Trichloroethene	9,100	8,600	7,200	7,100	4,000	3,000	2,800	2,800	3,800	3,500	330	540	2.500	2,900
1.2,4-Trimethylbenzene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	13	<12	<.25	<25
1.3.5-Trimethylbenzene	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	<12	<12	<25	<25
Vinyl Chloride	<84	<72	240	230	61	<34	130	200	89	56	85	<12	<25	<25
Xylenes, Total	<84	<72	<72	<72	<36	<34	<17	<34	<36	<30	23	14	<25	<25
Soil Vapor Extraction Wells: 1 - 40D														

#### Note:

Results are reported in parts per billion on a volume per volume basis (ppb|v/v) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

AS = Air sparging system (on or off).

\* As of May 1, 1998, began to cycle operation of soil vapor extraction branches.

**Bold** ≈ Analyte detected greater than the laboratory reporting limit

< = Not detected greater than the reporting limit provided.

The soil vapor extration (SVE) and air sparge (AS) systems were temporarily shut down on November 13, 2005 for assessment of the vadose zone and were restarted in April 2006.

Table 2
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

								SOUTHE	ST AREA							
	_							BRANCI	IES A - F							
	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF
CONSTITUENT (ppb[v/v])	4/26/1999	4/13/1999	12/14/1999	12/21/1999	4/18/2000	4/29/2000	10/6/2000	10/10/2000	4/27/2001	4/23/2001	9/29/2001 *	10/31/2001	4/23/2002	4/26/2002	10/23/2002	10/28/2002
1.1-Dichloroethane	14	5	47	38	17	29	49	32	<6.9	<140	<140	<130	14	10	<140	<130
cis-1,2-Dichloroethene	410	210	1,500	1,300	580	1,400	2,200	1,300	270	150	680	1,500	510	370	1,300	790
trans-1,2-Dichloroethene	40	22	180	160	59	130	160	130	NA	NA	NA	NA	NA	NA	NA	NA
4-Ethyltoluene	7	<2	<9.7	<7.8	<6.7	<13	<18	<8.2	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	53	5	54	58	52	79	52	95	20	<140	<140	<130	47	42	<140	<130
1,1,1-Trichloroethane	90	6	100	87	56	74	93	75	29	<140	<140	<130	27	19	<140	<130
Trichloroethene	250	94	650	540	400	710	920	750	150	140	280	410	300	330	720	430
1,2,4-Trimethylbenzene	14	2	<9.7	<7.8	<6.7	<13	<18	<8.2	<6.9	<140	<140	<130	<1.3	<0.64	<140	<130
1,3,5-Trimethylbenzene	<2	<2	<9.7	<7.8	<6.7	<13	<18	<8.2	<6.9	<140	<140	<130	<1.3	<0.64	<140	<130
Vinyl Chloride	12	15	180	29	12	<13	130	<8.2	60	<140	<140	<260	61	18	<140	<130
Xylenes, Total	29	5	<9.7	<7.8	<6.7	<13	<18	<8.2	<5.7	<140	<280	<260	<2.2	<1.1	<280	<270
Soil Vapor Extraction Wells:		·						1	40D		<u> </u>	·		<del></del>		

Notes: \* As of September 15, 2001, began cycling of two soil vapor extraction branches with weekly rotation of branches.

October 2002 data was validated to Level IV; no flags were required for the data in this table collected on that date.

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

AS = Air sparging system (on or off).

Bold = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided.

NA = Not analyzed.

Table 2
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

								SOUTHE	ST AREA							
								BRANCI	ES A - F							
	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF	AS-ON	AS-OFF
CONSTITUENT (ppb[v/v])	4/15/2003	4/21/2003	10/15/2003	10/18/2003	4/19/2004	4/23/2004	10/14/2004	10/19/2004	4/19/2005	4/25/2005	10/12/2005	10/12/2005	4/08/06	4/08/06	5/21/06	5/28/06
1,1-Dichloroethane	<130	<130	<150	<150	<13	<140	<140	<150	6.7	< 12.9	< 130	< 130	<13.4	<14.3	<14.3	<14.8
cis-1,2-Dichloroethene	190	470	390	340	790	160	330 (UB)	330 (UB)	742	742	430	400	449	458	567	392
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	< 0.7	< 13.7	< 130	< 130	63.8	74.6	86.2	49.8
4-Ethyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	<130	<130	<150	<150	29	<140	<140	<150	19.1	39.5	< 130	< 130	26.3	22.2	38.4	34
1.1.1-Trichloroethane	<130	<130	<150	<150	21	<140	<140	<150	19.2	30.5	< 130	< 130	22	23.1	39.7	33.2
Trichloroethene	<130	270	260	240	390	<140	180 (UB)	180 (UB)	407	323	240	230	322	309	378	279
1,2.4-Trimethylbenzene	<130	<130	<150	<150	<13	<140	<140	<150	0.86	< 12.9	< 130	< 130	<13.4	<14.3	<14.3	<14.8
1,3,5-Trimethylbenzene	<130	<130	<150	<150	<13	<140	<140	<150	< 0.66	< 12,9	< 130	< 130	<13.4	<14.3	<14.3	<14.8
Vinyl Chloride	<130	<130	<150	<150	30	<140	<140	<150	< 0.69	< 13.4	< 130	< 130	31.2	<14.3	19.8	<14.8
Xylenes, Total	<270	<270	<460	<450	30	<140	<140	<150	1.75	< 21.4	< 270	< 270	<40.2	<42.9	<42.9	<44.4
Soil Vapor Extraction Wells:								1	0D							

Notes: Results are reported in parts per billion on a volume per volume basis (pph[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

AS = Air sparging (on or off).

Bold = Analyte detected greater than the laboratory reporting limit

April and October 2003, April 2004, and April and October 2005 data was validated to Level II, no flags were required for the data in this table collected on those dates.

October 2004 data validated to Level II, (UB) = estimated value due to blank contamination

< = Not detected greater than the reporting limit provided.

NA = Not analyzed.

Table 2
Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

	_				ABOVEGRO	OUND STORAGE	TANK AREA				
					BI	RANCHES G and F	I <sup>(1)</sup>				
CONSTITUENT (ppb[v/v])	1/11/1996	11/25/1996	9/3/1997	11/18/1997	4/21/1998	10/16/1998	4/21/1999	11/22/1999	4/18/2000	10/2/2000	4/23/2001
1.1-Dichloroethane	39	270	11	6	<2	<2.0	<2.0	<2.0	9.1	10	1.3
cis-1,2-Dichloroethene	1,800	660	820	310	110	50	21	24	330	300	21
trans-1,2-Dichloroethene	120	63	59	24	4.8	2.2	<2.0	<2.0	28	27	NA
4-Ethyltoluene	190	<22	10	3	16	<2.0	4	2.1	<7.3	<6.1	NA
Tetrachloroethene	1,600	<22	460	67	21	6	2.8	<2.0	58	75	15
1.1.1-Trichloroethane	790	2,700	180	65	3.4	2	<2.0	<2.0	55	61	9,9
Trichloroethene	1,700	140	1,500	420	57	48	8.1	9	590	710	57
1,2,4-Trimethylbenzene	230	<22	12	4	22	<2.0	7.5	2.8	<7.3	<6.1	<0.71
1.3,5-Trimethylbenzene	120	<22	20	4	6.3	<2.0	2.2	<2.0	<7.3	<6.1	<0.71
Vinyl Chloride	130	<22	<8.4	22	7	<2.0	2.3	3.6	<7.3	<6.1	<0.74
Xylenes, Total	55	<22	25	46	57	<2.0	18	2.1	<7.3	31	3.49
Soil Vapor Extraction Wells:	<u></u> -	<u></u>			•	41 - 55					

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

(1) Branch H operations suspended as of the beginning of October 2002.

**Bold** = Analyte detected greater than the laboratory reporting limit.

< = Not detected greater than the reporting limit provided.

Table 2 Summary of Summa Canister Sampling for Soil Vapor Extraction Lines
Wayne Reclamation & Recycling

			<del></del>			ABOVEGROUND ST	ORAGE TANK ARE	A				
ŀ	BRANCHE	S G and H <sup>(1)</sup>					BRANCH G (I	EAST BRANCH)			<del></del>	
CONSTITUENT (ppb[v/v])	11/2/2001	4/23/2002	10/23/2002	12/18/2002 *	4/17/2003	10/15/2003	4/19/2004	10/19/2004	4/19/2005	10/12/2005	4/07/06	5/30/06
1.1-Dichloroethane	4.6	0.77	<140	<140	<130	<150	<13	5.7	< 13.2	< 140	<13.8	<14.3
cis-1,2-Dichloroethene	130	27	<140	580	190	<150	160	170 (UB)	65	290	805	132
trans-1,2-Dichloroethene	<0.57	NA	NA	NA	NA	NA	NA	NA	< 14.1	< 140	<13.8	<14.3
4-Ethyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethene	71	6.6	<140	<140	<130	<150	23	26.8	21.9	< 140	29.2	27.7
1.1.1-Trichloroethane	33	3.6	<140	<140	<130	<150	<12	16.9	74.3	< 140	<13.8	<14.3
Trichloroethene	150	22	180	440	280	260	360	350 (UB)	105	260	197	183
1,2,4-Trimethylbenzene	<0.69	<0.69	<140	<140	<130	<150	<13	4.0	< 13.2	< 140	<13.8	<14.3
1,3,5-Trimethylbenzene	<0.69	<0.69	<140	<140	<130	<150	<13	1.2	< 13.2	< 140	<13.8	<14.3
Vinyl Chloride	2.5	0.92	<140	<140	<130	<150	<14	18.4 (UB)	< 13.8	< 140	<13.8	<14.3
Xylenes, Total	41	2.79	<290	<290	<270	<450	47	9.3	< 22.1	< 290	<13.8	<14.3

Notes: Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

Bold = Analyte detected greater than the laboratory reporting limit.

October 2002 data was validated to Level IV; no flags were required for the data in this table collected on that date.

April and October 2003. April 2004, and April and October 2005 data was validated to Level II, no flags were required for the data in this table collected on those dates.

October 2004 data validated to Level II; (UB) = estimated value due to blank contamination.

(1) Branch H operations suspended as of the beginning of October 2002

< = Not detected greater than the reporting limit provided.

NA = Not analyzed.

<sup>\*</sup> Additional sampling following the completion and connection of new Soil Vapor Extraction Wells 56, 57, and 58

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

						MONI	TORING WELL N	4W-1D (Southea	st Area)					PRG
CONSTITUENT	Date Sampled	8/1988	6/7/1996	11/6/1996	6/12/1997	10/14/1998	10/13/1999	10/2/2000	10/31/2001	10/25/2002	10/15/2003	10/20/2004	10/12/2005	(μg/L)
VOCs (µg/L)									. <u>.</u>	<del></del>				
Acetone		ND	ND	NA	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	3,650
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	
2-Butanone (MEK)		ND	ND	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	
n-Butylbenzene		ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	
Carbon Disulfide		ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	768
Chloroethane		ND	ND	NA	ND	ND	ND	ND	ND	ND	< 5.0	<2.0	< 2	
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.274
Dibromomethane		ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	<1	
1,1-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< l	
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.0167
cis-1,2-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	70
trans-1,2-Dichloroether	ne	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< l	100
1,2-Dichloroethene, To	tal	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< l	700
4-Methyl-2-pentanone	(MIBK)	ND	ND	NA	NA	NA	ND	ND	ND	ND	<12.5	<20.0	< 20	487
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.43
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.314
Trichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	2.54
1,2,4-Trimethylbenzen	e	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	NA	< 5	
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	828
TOTAL VOCs		ND	ND	ND	ND	ND	ND	ND	ND _	ND	ND	ND	ND	
Metals (mg/L)														
Arsenic, Dissolved		0.0059	0.005	ND	ND	ND	ND	ND	ND	ND	<0.100	< 0.0100	< 0.01	
Barium, Dissolved		0.132	0.003	0.13	0.12	0.16	0.68	0.14	0.18	0.226	<b>0.147</b>	<b>0.140</b>	0.175	
Cadmium, Dissolved		0.132 ND	ND	ND	ND	ND	ND	ND	ND	0.226 ND		<0.00500	< 0.001	
Chromium, Dissolved	lotal	ND ND	ND ND	ND ND	ND ND	0.013	ND ND	ND ND	ND ND	ND ND	<0.030	<0.00300 <b>0.0207</b>	< 0.001 < 0.01	
	lOtal	0.009	ND ND	ND ND	ND ND	0.013 ND	ND ND	ND ND	ND ND	ND ND	<0.040	<0.00500	< 0.01	
Cyanide, Total											<0.005			
Lead, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.080	<0.00500	< 0.005	
Nickel, Dissolved		ND	ND	ND	0.051	ND	ND	ND	ND	0.012	0.013	0.0117	< 0.05	
Zinc, Dissolved		0.013	0.06	ND	0.025	0.031	0.13	ND	0.068	0.072	0.220	<0.0200	0.0358	

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003, October 2004, and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit.

*Italics* = Reporting limit greater than the corresponding PRG.

ND = Not detected greater than the method detection limit.

NA = Not analyzed.

<sup>-- =</sup> No PRG assigned.

Table 3

Monitoring Well Analytical Results

Wayne Reclamation & Recycling

						MONITORING	WELL MW-3S	(Southeast Area)					PRG
CONSTITUENT Date	te Sampled	3/1988	8/1988	11/29/1995	8/27/1996	11/06/1996	6/13/1997	10/14/1998	10/13/1999	10/02/2000	10/31/2001	10/15/2003	(μ <b>g/L</b> )
VOCs (µg/L)				_					<u>—</u>				-
Acetone		ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	<20.0	3,650
Benzene		ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	
2-Butanone (MEK)		ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	
n-Butylbenzene		ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	<1.0	
Carbon Disulfide		ND	2.3	NA	NA	NA	NA	NA	ND	ND	ND	<1.0	768
Chloroethane		ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	<5.0	
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	0.274
Dibromomethane		ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	<1.0	
1,1-Dichloroethane		ND	23	ND	ND	1.5	ND	ND	ND	ND	ND	<1.0	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	
1,1-Dichloroethene		ND		ND	ND		ND	ND	ND	ND	ND	<1.0	0.0167
cis-1,2-Dichloroethene		NA	NA	NA	3.500	2,600	1,200	1.0020	E. LANE - S	S PE			70
trans-1,2-Dichloroethene		NA	NA	NA	122 : 13 <b>0 - 1</b>	92	45	54	33	38	42.6	22.2	100
1,2-Dichloroethene, Total		24,000		\$2.200 <sup>w</sup>	赛 3,600 经	2.692	1,24517.0	Marie San			7/1		(170)
1,2-Dichloropropane		ND	8.42	ND	ND	3.74	ND	ND	ND	ND	5 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	<1.0	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	700
4-Methyl-2-pentanone (MIBK	K)	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	<12.5	487
Tetrachloroethene	,	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1.43
Toluene		ND	3.4	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	0.314
Trichloroethene		ND	1.1	ND	ND	ND	ND	ND	ND			1.9	2.54
1,2,4-Trimethylbenzene		ND	ND	ND	ND	NA	NA	NA	ND	ND	ND	<1.0	
Vinyl Chloride		12 N 300 N	E (	ELECTRICAL PA	4 <b>94</b>	1. S. 1.					( )	· · · · · · · · · · · · · · · · · · ·	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	828
TOTAL VOCs		25,300.0	7,385.3	2,580	4,010	2,959.1	1,335	1,274	1,743	945	786	295.2	
Metals (mg/L)		_	<u>-</u>										
Arsenic, Dissolved		0.015	0.0234	0.005	ND	ND	ND	ND	0.011	ND	ND	<0.100	
Barium, Dissolved		0.306	0.32	0.08	0.04	ND	ND	0.048	0.28	0.032	0.041	<0.020	
Cadmium, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.020	
Chromium, Dissolved total		ND ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	
Cyanide, Total		0.015	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	
Lead, Dissolved		ND	ND	ND ND	ND ND	ND	ND	ND	ND ND	ND	ND	<0.080	
Nickel, Dissolved		ND ND	0.0151	ND	ND	ND ND	ND	ND	ND	0.013	ND	0.020	
Zinc, Dissolved		ND	0.0126	ND	ND	ND	ND	ND	0.27	ND	ND	<0.050	
21110, 2713301700		140	0.0120	ND .	110	110	110	110	U-21/			NO.030	

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2003 data validated to Level II; no flags were required for the data in this table collected on that date.

This monitoring well was scheduled for sampling in October 2002 and October 2004, but due to dry conditions at the site, there was inadequate groundwater volume.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table 3

Monitoring Well Analytical Results
Wayne Reclamation & Recycling

l J										MONITO	RING WEL	L MW-4S (	Recovery W	Vell RW-4 Ar	rea)	_								PRG
CONSTITUENT Date Sampled	8/1988	7/23/1992	11/28/1995	8/27/1996	6/12/1997	11/18/1997	4/21/1998	10/15/1998	4/12/1999	10/13/1999	5/4/2000	10/2/2000	4/19/2001	10/31/2001	4/23/2002	10/23/2002	4/16/2003	10/15/2003	4/20/2004	10/19/2004	04/19/2005	10/13/2005	04/26/2006	
VOCs (µg/L)		- · · · · · · · · · · · · · · · · · · ·							_														<del></del>	
Acetone	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0	<20	<20	< 20	< 20	< 20	3,650
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.617
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA	<2.0	<2.0	< 2	< 2	< 2	
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	<20	<20	< 20	< 20	< 20	
n-Butylbenzene	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	<1	< l	< 1	
Carbon Disulfide	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<20	<20	< 20	< 20	< 20	768
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 5.0	<5.0	< 2.0 (J)	<2.0	< 2	< 2	< 2	1 1
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	NĎ	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.274
Dibromomethane	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	973
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.0167
cis-1,2-Dichloroethene	ND	ND	ND	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	68	<1.0	< l	1	< 1	70
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< l	< 1	100
1,2-Dichloroethene, Total	ND	ND	ND	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	68	<1.0	< 1	1	< 1	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< l	< 1	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	700
4-Methyl-2-pentanone (MIBK)	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5	<20	<20	< 20	< 20	< 20	487
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	1.43
Toluene	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< l	1,000
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.314
Trichloroethene	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0		<1.0	< 1	< 1	< 1	2.54
1,2,4-Trimethylbenzene	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	NA	NA	< 5	< 5	< 5	
Vinyl Chloride			ND	ND	ND	ND	7.20		****					<u>-</u>			<u> </u>	<b>E</b>						0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	828
TOTAL VOCs	2.7	1	ND	16.6	ND	ND	12	15	17	29	33	23	13	7.4	6.1	15.1	18.4	24.8	167	12.0	8.8	8.2	8. <u>4</u>	
Metals (mg/L)	ŀ																							ŀ
Arsenic, Dissolved	NA	ND	0.006	ND	ND	ND	ND	ND	ND	0.0082	ND	0.0081	ND	ND	ND	ND	< 0.10	< 0.100	0.0201	0.0126	0.0173	0.0173	< 0.100	<b>!</b>
Barium, Dissolved	NA	0.159	0.13	0.11	0.67	0.28	0.48	0.3	0.49	0.58	0.79	1.1	1.1	0.26	0.26	0.35	0.219	0.230	0.228	0.194	0.194	0.207	0.140	
Cadmium, Dissolved	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.030	< 0.030	< 0.005	< 0.00100	< 0.001	< 0.001	< 0.001	
Chromium, Dissolved total	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.040	< 0.040	< 0.005	< 0.0100	< 0.01	< 0.01	< 0.01	
Cyanide, Total	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.005	0.0071	< 0.005	< 0.00500	< 0.005	< 0.005	< 0.005	
Lead, Dissolved	NA	ND	ND	0.0032	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.16	ND	< 0.080	< 0.080	0.00597	< 0.00500	< 0.005	< 0.005	< 0.005	
Nickel, Dissolved	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.011	ND	ND	ND	< 0.010	< 0.010	< 0.010	< 0.0500	< 0.05	< 0.05	< 0.05	
Zinc, Dissolved	NA	0.035	0.02	ND	0.036	ND	ND	0.023	0.025	ND	ND	ND	0.022	ND	ND	0.056	< 0.050	< 0.050	0.0233	0.025	< 0.02	< 0.02	< 0.02	

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

April 2003, October 2003, October 2004, April 2005, and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates. April 2004 data validated to Level II; (J) = estimated.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit. *Italics* = Reporting limit greater than the corresponding PRG.

ND = Not detected greater than the method detection limit.

Shaded = Analyte detected greater than the corresponding PRG.

NA = Not analyzed.

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Table 3

Monitoring Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT   Date Sampled   3/1988   8/1988   11/29/1995   8/27/1996   11/6/1996   6/12/1997   10/15/1998   10/13/1999   10/23/2000   10/23/2002   10/23/2002   10/15/2003   10/19/2004   10/12/2005	PRG						ll RW-4 Area)	S (Recovery Wel	<b>G WELL MW-7</b>	MONITORIN							
Acetone	(μg/L)	10/12/2005	10/19/2004	10/15/2003	10/23/2002	10/30/2001					11/6/1996	8/27/1996	11/29/1995	8/1988	3/1988	Date Sampled	CONSTITUENT
Acetore			_														VOCs (µg/L)
Bromomethane	3,650	< 20	<20.0	<20.0	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND		
2-Buttone (MEK) ND ND ND ND NA	0.617	< 1	<1.0	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		Benzene
n-Butylbenzene ND		< 2	<2.0	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		Bromomethane
Carbon Disulfide		< 20	<20.0	<12.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND		2-Butanone (MEK)
Chlorothane		< 1	<1.0	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		n-Butylbenzene
Chloroform	768	< 20	<20.0	<1.0	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND		Carbon Disulfide
Dibromomethane		< 2	<2.0	<5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		Chloroethane
1,1-Dichloroethane	0.274	< 1	<1.0	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		Chloroform
1,2-Dichloroethane		< 1	<1.0	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		Dibromomethane
1,1-Dichloroethene	973	2.60	4.3	4.8	3.4	2.9	ND	ND	ND	5.1	<b>7.4</b>	10	7.4	23	ND		1,1-Dichloroethane
Cis-1,2-Dichloroethene   NA NA NA   110   12   12   12   12   12   12   1		< 1	<1.0	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		1,2-Dichloroethane
trans-1,2-Dichloroethene         NA         NA         59         74         55         48         23         10         12         21.2         20.6         33.0         29         18           1,2-Dichloroethene, Total         1,2-Dichloroptopane         ND	0.0167	< 1	<1.0	< 1.0			ND	ND			ND	ND	ND	ND	ND		1,1-Dichloroethene
1,2-Dichloroethene, Total   1,2-Dichloropropane   ND	70				U.A. Taranta	SE 1872.25	1207			640 75	780	* 5 9 <b>8</b> 6 1 7	<b>E</b> 1,100 ( ) 2	NA	NA	ene	cis-1,2-Dichloroethe
1,2-Dichloropropane         ND         ND <td>100</td> <td>18</td> <td>29</td> <td>33.0</td> <td></td> <td>NA</td> <td>thene</td> <td>trans-1,2-Dichloroet</td>	100	18	29	33.0											NA	thene	trans-1,2-Dichloroet
Ethylbenzene	(170)	X 120			35 <b>25 M</b>	IT. 2082	132 : 📆	. 4 106 ay 22 .		688	855	*** 1,05K j	\$\$ 1.1 <b>9</b> }	48 - 1,90 <b>0 - 313</b>	- 2,600	Total	1,2-Dichloroethene,
4-Methyl-2-pentanone (MIBK)         ND         ND         NA         NA         NA         NA         NA         ND         ND         ND         <12.5	1.25	< l	<1.0	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	e	1,2-Dichloropropan
Tetrachloroethene         ND	700	< 1	<1.0	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		Ethylbenzene
Toluene         ND         <1.0         <1.0         <1.0         <1           1,1,1-Trichloroethane         ND         <1.0	487	< 20	<20.0	<12.5	ND	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ne (MIBK)	4-Methyl-2-pentano
1,1,1-Trichloroethane         ND         ND </td <td>1.43</td> <td>&lt; 1</td> <td>&lt;1.0</td> <td>&lt;1.0</td> <td>ND</td> <td></td> <td>Tetrachloroethene</td>	1.43	< 1	<1.0	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		Tetrachloroethene
1,1,2-Trichloroethane         ND         ND </td <td>1,000</td> <td>&lt; 1</td> <td>&lt;1.0</td> <td>&lt;1.0</td> <td>ND</td> <td></td> <td>Toluene</td>	1,000	< 1	<1.0	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		Toluene
Trichloroethene         ND         <1.0         <1.0         <1.0         <1           1,2,4-Trimethylbenzene         ND         NA         <5	200	< 1	<1.0	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ne	1,1,1-Trichloroethan
1,2,4-Trimethylbenzene         ND         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0         < 1.0<	0.314	< 1	<1.0					- :				ND			ND	ne	1,1,2-Trichloroethan
Vinyl Chloride ND ND ND ND ND ND ND ND ND <1.0 <1.0 <1.0	2.54	< 1											Name and the second		ND		Trichloroethene
		< 5						ND						ND	ND	zene	1,2,4-Trimethylbenz
	0.0283	< 1	<1.0														
Xylenes, Total         ND         < 1.0         < 1.0         < 1	828																
TOTAL VOCs 2,600 1,924.3 1,169.6 1,156 862.4 693.1 110 112.1 132 211.1 261.0 381.8 363.3 220.6	••	220.6	363.3	381.8	261.0	211.1	132	112.1	110	693.1	862.4	1,156	1,169.6	1,924.3	2,600		TOTAL VOCs
Metals (mg/L)																	Metals (mg/L)
Arsenic, Dissolved 0.005 0.003 ND 0.0118 < 0.01		< 0.01	0.0118	< 0.100	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.003	0.005		Arsenic, Dissolved
Barium, Dissolved 0.286 0.191 0.17 0.12 0.16 0.16 0.2 0.77 0.22 0.17 0.202 0.135 0.125 0.174		0.174	0.125	0.135	0.202	0.17	0.22	0.77	0.2	0.16	0.16	0.12	0.17	0.191	0.286		Barium, Dissolved
Cadmium, Dissolved ND		< 0.001	< 0.00100	< 0.030	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	d	Cadmium, Dissolve
Chromium, Dissolved total ND <0.040 <0.0100 < 0.01		< 0.01	< 0.0100	< 0.040	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ed total	Chromium, Dissolve
Cyanide, Total ND 0.016 0.095 ND 0.0060 <0.00500 <0.005		< 0.005	< 0.00500	0.0060	ND	ND	ND	ND	ND		ND	ND	0.095	0.016	ND		
Lead, Dissolved ND		< 0.005	< 0.00500	< 0.080	ND	ND	ND	ND	ND	ND	ND	0.0099	ND	ND	ND		
Nickel, Dissolved ND ND ND 0.06 ND ND ND ND ND ND ND ND <0.010 <0.0500 < 0.05		< 0.05	< 0.0500	< 0.010	ND	ND	0.006	ND	ND			0.06					■ · · · · · · · · · · · · · · · · · · ·
Zinc, Dissolved ND 0.0263 ND 0.02 ND ND ND 0.22 ND ND ND ND <0.050 0.0272 < 0.02		< 0.02			ND			0.22									

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003, October 2004, and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table 3 Monitoring Well Analytical Results Wayne Reclamation & Recycling

										MON	ITORING W	ELL MW-9	9S (Abovegi												PRG
CONSTITUENT Date Sampled	3/1988	8/1988	7/24/1992	11/7/1995	8/27/1996	6/12/1997	11/18/1997	4/21/1998	10/15/1998	4/12/1999	10/20/1999	5/4/2000	10/2/2000	4/19/2001	10/30/2001	4/23/2002	10/23/2002	4/16/2003	10/15/2003	4/20/2004	10/19/2004	4/19/2005	10/13/2005	4/26/2006	(μ <b>g/L</b> )
VOCs (µg/L)																	-								
Acetone	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0	<20	<20	< 20	< 100	< 100	3,650
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0		<1.0	< 1	< 5	< 5	0.617
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA	<2.0	<2.0	< 2	< 10	< 10	
2-Butanone (MEK)	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	<20	<20	< 20	< 100	< 100	
n-Butylbenzene	ND	ND	ND	4.2	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 5	< 5	
Carbon Disulfide	ND	0.59	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<20	<20	< 20	< 100	< 100	768
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 5.0	<5.0	<2.0 (J)	<2.0	< 2	< 10	< 10	<b>1</b> -
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 5	< 5	0.274
Dibromomethane	ND	ND	NA	1.8	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 5	< 5	
1,1-Dichloroethane	ND	8.3	ND	18	ND	13	ND	16	17	12	5.5	59	13	ND	1.5	1.7	3.9	4.2	<1.0	16	2.3	1.2	20	< 1	973
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 5	< 5	
1,1-Dichloroethene	ND	92	ND		ND	15			i i stille	<b>W. 114.</b>	Section 2		63	ND			36.1		<1.0						0.0167
cis-1,2-Dichloroethene	NA	NA	NA		24.00	18,000	NA	10,000	19,000	220	NA		37,000	*****		- 4.5	18,306	15.28	29,400	35,6		Conformation (Conformation)			70
trans-1,2-Dichloroethene	NA	NA	NA		ND	200	NA		- 198	95	NA		210	ND	74.9	63.3			2472	416.6	84	36		78	100
1,2-Dichloroethene, Total	1120	72,000	75.00		1	18.200	42.39				1.00		37,210		7 3 43 43 E				3 452		A 100 Year 1			70	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	7	<1.0	<1.0	< 1	< 5	< 5	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 5	< 5	700
4-Methyl-2-pentanone (MIBK)	ND	2,2	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5	<20	<20	< 20	< 100	< 100	487
Tetrachloroethene	ND		ND		ND	78	236	200	256	734	. 02	100	### 97 <u>}}</u>	ND	28	45.5	( C. 4 / 34	<b>371</b>	106						1.43
Toluene	ND	21	ND	ND	ND	ND	ND	8.5	9.7	22	ND	ND	ND	ND	ND	ND	ND	<1.0	2.1	4.0	<1.0	< 1	6.4	< 1	1,000
1,1,1-Trichloroethane	ND	9.9	ND	ND	ND	ND	ND	13	21	13	ND	5.6	6.8	ND	1.3	2.5	5.0	3.2	9.6	11	1.4	1.9	10	1	200
1,1,2-Trichloroethane	ND	ND	ND	3.4	ND	ND	ND	435	13	ND	ND		ND	ND	ND	ND	ND	7.15			<1.0	< 1	< 5	< 5	0.314
Trichloroethene				7.17. <b>000</b>	. Z. 🗯	: 24 <b>446</b> 2	67,000	25,700	12,000	* 16 <b>,000</b>	5,000		21,000			3 <b>7.786</b> 57		4.180	2,200		Agent Services				2.54
1,2,4-Trimethylbenzene	ND	ND	NA	4.3	ND	ND	NA	ND	ND	6.2	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	NA	NA	< 5	< 25	< 25	]
Vinyl Chloride	ND				200				ND					ND											0.0283
Xylenes, Total	ND	ND_	ND	ND	ND	ND	ND	ND	ND	7.3	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	2.9	<1.0	< 1	< 5	< 5	828
TOTAL VOCs	51,000	50,641	33,040	48,363.1	52,680	42,506	110,066	35,591.5	31,530.7	25,773.5	14,033.5	49,585	58,529.8	21,400	8,064	13,025.1	25,124.8	25,038.2	62,373.0	74,844.6	12,068.4	7,873.8	104,766.4	14,350.0	
Metals (mg/L)																									1
Arsenic, Dissolved	0.008	0.0106	0.011	0.01	0.006	ND	ND	ND	ND	ND	0.026	ND	0.0051	ND	ND	ND	ND	< 0.10	< 0.100	< 0.100	<0.0100	< 0.01	0.0103	< 0.01	l
Barium, Dissolved	0.181	0.139	0.144	0.11	0.04	ND	ND	0.035	0.079	0.04	0.059	0.08	0.055	0.027	0.053	0.027	0.121	0.089	0.048	0.0749	0.09	0.0674	0.102	0.0775	l _
Cadmium, Dissolved	ND	ND	271	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.030	< 0.030	<0.005	< 0.00100	< 0.001	< 0.001	< 0.001	
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0052	ND	ND	ND	ND	ND	ND	<0.040	<0.040	< 0.005	< 0.0100	< 0.01	< 0.01	< 0.01	
Cyanide, Total	0.03	0.014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.005	< 0.005	< 0.005	< 0.00500	< 0.005	< 0.005	< 0.005	-
Lead, Dissolved	ND	ND	ND	ND	0.0031	ND	ND	0.042	ND	ND	0.0026	ND	ND	ND	ND	0.15	ND	< 0.080	< 0.080	<0.005	< 0.00500	< 0.005	< 0.005	< 0.005	
Nickel, Dissolved	ND	0.0106	ND	ND	ND	ND	ND	ND	ND	ND	0.027	ND	0.032	0.0073	0.01	0.013	0.022	0.018	0.020	0.0169	< 0.0500	< 0.05	< 0.05	0.0103	
Zinc, Dissolved	ND	0.0212	0.015	ND	ND	0.023	0.03	ND	ND	ND	0.062	ND	ND	ND	ND	ND	ND	< 0.050	< 0.050	<0.020	< 0.0200	< 0.02	< 0.02	< 0.02	
																		<del></del>							

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

April 2003, October 2003, October 2004 and April 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

April 2004 and October 2005 data validated to Level II; (J) = estimated.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit. *Italicx* = Reporting limit greater than the corresponding PRG.

NA = Not analyzed

ND = Not detected greater than the method detection limit.

Table 3

Monitoring Well Analytical Results
Wayne Reclamation & Recycling

							<u> </u>			Mo	ONITORIN	G WELL MY	V-10S (Sout	heast Area)			<del></del>							PRG
CONSTITUENT Date Sampled	3/1988	8/1988	7/23/1992	11/08/1995	8/27/1996	11/18/1997	4/21/1998	10/15/1998	4/12/1999	10/13/1999	5/04/2000	10/02/2000	4/19/2001	10/31/2001	4/23/2002	10/25/2002	4/16/2003	10/15/2003	4/20/2004	10/22/2004	04/19/2005	10/13/2005	04/26/2006	(μg/L)
VOCs (µg/L)										-														
Acetone	ND	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0	<20	<20	< 20	< 20	< 20	3,650
Benzene	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.617
Bromomethane	ND	ND	ND	4.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA	<2.0	<2.0	< 2	< 2	< 2	
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	<20	<20	< 20	< 20	< 20	
n-Butylbenzene	ND	ND	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	4.5	<1.0	<1.0	<1	< 1	< l	
Carbon Disulfide	ND	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<20	<20	< 20	< 20	< 20	768
Chloroethane	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 5.0	<5.0	<2.0 (J)	<2.0	< 2	< 2	< 2	
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.274
Dibromomethane	ND	ND	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< i	< 1	< 1	
1,1-Dichloroethane	630	140	91	ND	ND	ND	ND	28	6.3	7.9	ND	5.7	ND	ND	1.9	5.1	1.1	<1.0	<1.0	1.2	< l	2.8	< 1	973
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	
1,1-Dichloroethene	ND	7.1.2	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND			<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.0167
cis-1,2-Dichloroethene	NA	NA	NA			NA		3 3446	7.70	6.8	3.64	3,400	7/21.9			**************************************	43.8		1	. 10				70
trans-1,2-Dichloroethene	NA	NA	NA			NA		178	200	3 12. <b>018</b> %		100	1	6.2	*		47	80.6			26	65	47	100
1,2-Dichloroethene, Total	56,000	ALMAN .	4 <b>3.76</b>		***	4.140	5/60		1.00	\$12. <b>00£3</b> \$		3,500	2.5	124.2			90.8		20					(170)
1,2-Dichloropropane	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	1.25
Ethylbenzene	ND	4	ND	5.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	700
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5	<20	<20	< 20	< 20	< 20	487
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	1.43
Toluene	ND	4.50	7.00	270	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	1,000
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< l	< 1	< 1	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.314
Trichloroethene	ND	2	ND			ND	ND		ND	ND	ND	ND	ND	ND			1.3	1.9			< 1	2	1.8	2.54
1,2,4-Trimethylbenzene	ND	ND	NA	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	NA	NA	< 5	< 5	< 5	
Vinyl Chloride			10.0								ND		ND	ND										0.0283
Xylenes, Total	ND	28	96	21.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< l	< 1	< 1	828
TOTAL VOCs	62,130	32,501	20,987	40,456.0	16,120	8,510	5,530	4,509	8,426.3	12,721.5	3,770	3,625.7	2,030	124,2	3,195.3	5,540.2	215.2	1,292.8	1,250.5	1,507.9	357.4	1,651	471	
Metals (mg/L)																								
Arsenic, Dissolved	0.009	ND	ND	0.006	0.002	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	< 0.10	< 0.100	0.0242	< 0.0100	0.0107	< 0.01	< 0.01	
Barium, Dissolved	0.239	0.0537	0.137	0.04	0.04	0.062	ND	0.032	0.023	0.36	0.068	0.033	0.047	0.064	0.061	NA	0.035	< 0.020	0.0324	0.0686	0.0539	< 0.02	0.0472	
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	< 0.030	< 0.030	< 0.005	< 0.00100	< 0.001	< 0.001	< 0.001	
Chromium, Dissolved total	0.017	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	< 0.040	< 0.040	0.00849	< 0.0100	< 0.01	< 0.01	< 0.01	
Cyanide, Total	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0094	ND	0.037	NA	< 0.005	0.011	0.0381	0.0128	0.108	< 0.005	< 0.005	
Lead, Dissolved	ND	ND	ND	ND	0.0028	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	NA	< 0.080	<0.080	<0.005	< 0.00500	< 0.005	< 0.005	< 0.005	
Nickel, Dissolved	ND	ND	0.021	ND	ND	0.021	ND	ND	ND	ND	ND	0.009	0.0052	0.012	ND	NA	0.035	0.017	0.0218	< 0.0500	< 0.05	< 0.05	< 0.05	
Zinc, Dissolved	ND	0.0089	ND	ND	ND	ND	ND	ND	ND	0.34	ND	ND	ND	ND	ND	NA	< 0.050	<0.050	0.0295	0.0232	0.0325	< 0.02	< 0.02	
2 5.0001.00																								

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

Due to dry conditions at the site, there was inadequate groundwater volume for analysis of the complete sample set in October 2002; thus samples for submitted for VOC analysis only.

April 2003, October 2003, October 2004, April 2005, and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

April 2004 data validated to Level II; (J) =estimated.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

			***	_		· · · · · · · · · · · · · · · · · · ·	MO	ONITORING V	VELL MW-11S	(Southeast Ar	ea)						PRG
CONSTITUENT	Date Sampled	3/1988	8/1988	7/24/1992	11/08/1995	8/27/1996	11/06/1996	6/13/1997	10/15/1998	10/13/1999	10/02/2000	10/31/2001	10/24/2002	10/15/2003	10/22/2004	10/13/2005	(μg/L)
VOCs (µg/L)																	
Acetone		ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	3,650
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 1.0	<1.0	< 1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	
2-Butanone (MEK)		ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	
n-Butylbenzene		ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	
Carbon Disulfide		ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	768
Chloroethane		ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.274
Dibromomethane		ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethane		ND	ND	ND	19	5.3	8.3	6.6	ND	5.4	5.7	8.6	5.9	5.9	3.7	3.7	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0		< 1	0.0167
cis-1,2-Dichloroethe	ne	NA	NA		290	150	**. 206 V.#*		160		( 40 E 8					17.	70
trans-1,2-Dichloroetl		NA	NA	ND	15	6.5	10	10	ND	ND	12	15.7	8.7	<1.0	5.6	8.3	100
1,2-Dichloroethene,		44	19		295	1563	21 <b>9</b> 43 %		160		77						(170)
1,2-Dichloropropane	:	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	700
4-Methyl-2-pentanor	ne (MIBK)	ND	ND	ND	NA	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	<20.0	< 20	487
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.43
Toluene		ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1,000
1,1,1-Trichloroethan	ne .	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	200
1,1,2-Trichloroethan	ie	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.314
Trichloroethene		ND	ND	ND						ND	No. M.						2.54
1,2,4-Trimethylbenz	ene	ND	ND	NA	ND	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	NA	< 5	
Vinyl Chloride														44/2			0.0283
Xylenes, Total		ND	ND	ND	ND	ND _	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	828
TOTAL VOCs		48	22	20	336.1	192.3	236.1	208.9	232	635.4	643.9	815.8	832.6	894.3	508.2	437.1	
Metals (mg/L)																	
Arsenic, Dissolved		ND	ND	ND	0.001	ND	ND	ND	ND	ND	ND	ND	ND	< 0.100	< 0.0100	< 0.01	
Barium, Dissolved		0.418	0.285	0.17	0.11	0.05	ND	ND	0.042	0.082	0.059	0.085	0.122	0.106	0.0830	0.103	
Cadmium, Dissolved	i	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.030	< 0.00100	< 0.001	
Chromium, Dissolve		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.040	< 0.0100	< 0.01	
Cyanide, Total		ND	0.04	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.005	< 0.00500	< 0.005	
Lead, Dissolved		ND	ND	ND	ND	0.0028	ND	ND	0.015	ND	ND	ND	ND	< 0.080	< 0.00500	< 0.005	
Nickel, Dissolved		ND	ND	ND	ND	0.03	ND	ND	ND	ND	0.006	ND	ND	< 0.010	< 0.0500	< 0.05	
Zinc, Dissolved		0.026	0.0145	0.122	ND	ND	ND	0.021	ND	0.025	ND	ND	0.052	< 0.050	< 0.0200	< 0.02	
2			*****														

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

 $Volatile\ organic\ compounds\ (VOCs)\ and\ Preliminary\ Remediation\ Goals\ (PRGs)\ reported\ in\ micrograms\ per\ liter\ (\mu g/L).$ 

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003, October 2004, and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

			MONITO	RING WELL MW-13S (South	east Area)		<del></del>	PRG
CONSTITUENT Date Sampled	8/1988	11/1/2001	4/23/2002	10/24/2002	10/17/2003	10/22/2004	10/14/2005	(μg/L)
VOCs (µg/L)								
Acetone	ND	ND	ND	ND	<20.0	<20.0	< 20	3,650
Benzene	ND	ND	ND	ND	<1.0	<1.0	< 1	0.617
Bromomethane	ND	ND	ND	ND	NA	<2.0	< 2	
2-Butanone (MEK)	ND	NA	NA	NA	<12.5	<20.0	< 20	
n-Butylbenzene	ND	ND	ND	ND	<1.0	<1.0	< 1	
Carbon Disulfide	ND	ND	ND	ND	<1.0	<20.0	< 20	768
Chloroethane	ND	ND	ND	ND	<5.0	<2.0	< 2	
Chloroform	ND	ND	ND	ND	<1.0	<1.0	< 1	0.274
Dibromomethane	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethane	ND	ND	ND	ND	<1.0	<1.0	< 1	973
1,2-Dichloroethane	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethene	ND	ND	ND	ND	<1.0	<1.0	< 1	0.0167
cis-1,2-Dichloroethene	NA			14 / 14 / 14 / 14 / 14 / 14 / 14 / 14 /				70
trans-1,2-Dichloroethene	NA	11.7	6.4	6.1	3.3	1.9	2.4	100
1,2-Dichloroethene, Total	28	10 10 10 10 10 10 10 10 10 10 10 10 10 1	2064	77.15 <b>1</b> 8	131.3	88.9	<b>77.4</b>	(170)
1,2-Dichloropropane	ND	4	**************************************			<1.0		1.25
Ethylbenzene	ND	ND	ND	ND	<1.0	<1.0	< 1	700
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	ND	<12.5	<20.0	< 20	487
Tetrachloroethene	ND	ND	ND	ND	<1.0	<1.0	< 1	1.43
Toluene	ND	ND	ND	ND	<1.0	<1.0	< 1	1,000
1,1,1-Trichloroethane	ND	ND	ND	ND	<1.0	<1.0	< 1	200
1,1,2-Trichloroethane	ND	ND	ND	ND	<1.0	<1.0	< 1	0.314
Trichloroethene	ND				70.40			2.54
1,2,4-Trimethylbenzene	ND	ND	ND	ND	<1.0	NA	< 5	
Vinyl Chloride	ND							0.0283
Xylenes, Total	ND	ND	ND	ND	<1.0	<1.0	<1	828
TOTAL VOCs	28	540.1	367.1	422.5	255.3	221.9	360.3	
Metals (mg/L)								
Arsenic, Dissolved	0.0036	ND	ND	ND	<0.100	< 0.0100	< 0.01	<del></del>
Barium, Dissolved	0.0705	0.19	0.12	<b>0.218</b> (J)	0.177	0.106	0.197	
Cadmium, Dissolved	ND	ND	ND	ND	< 0.030	<0.00100	< 0.001	
Chromium, Dissolved total	ND	ND	ND	ND	< 0.040	<0.0100	< 0.01	
Cyanide, Total	0.048	NA	NA	NA	NA	NA	NA	
Lead, Dissolved	ND	ND	0.16	ND	< 0.080	<0.00500	< 0.005	
Nickel, Dissolved	0.0167	ND	ND	ND	< 0.010	<0.0500	< 0.05	••
Zinc, Dissolved	0.0542	ND	ND	<b>0.054</b> (J)	< 0.050	<0.0200	< 0.02	

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003, October 2004, and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

April 2004 data validated to Level II; (J) = estimated.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

		MONITORING WELL MW-13D (Southeast Area)	PRG
CONSTITUENT	Date Sampled	1/28/2002 <sup>(1)</sup>	(µg/L)
VOCs (µg/L)			
Acetone		ND	3,650
Benzene		ND	0.617
Bromomethane	į.	ND	
2-Butanone (MEK)		ND	
n-Butylbenzene		ND	
Carbon Disulfide	1	ND	768
Chloroethane		ND	
Chloroform		ND	0.274
Dibromomethane		ND	
1,1-Dichloroethane		ND	973
1,2-Dichloroethane		ND	<del></del>
1,1-Dichloroethene		ND	0.0167
cis-1,2-Dichloroethene		ND	70
trans-1,2-Dichloroethene		ND	100
1,2-Dichloroethene, Total		ND	(170)
1,2-Dichloropropane		ND	1.25
Ethylbenzene		ND	700
4-Methyl-2-pentanone (MIBK)	İ	ND	487
Tetrachloroethene	1	ND	1.43
Toluene		ND	1,000
1,1,1-Trichloroethane		ND	200
1,1,2-Trichloroethane		ND	0.314
Trichloroethene		ND	2.54
1,2,4-Trimethylbenzene	l	ND	
Vinyl Chloride		ND	0.0283
Xylenes, Total		ND	828
TOTAL VOCs		ND	
Metals (mg/L)			
Arsenic, Dissolved	İ	<0.005	
Barium, Dissolved	İ	0.10	
Cadmium, Dissolved		<0.03	
Chromium, Dissolved total		<0.04	
Cyanide, Total		NA	
Lead, Dissolved		<0.08	<del></del>
Nickel, Dissolved		<0.02	
B.			
Zinc, Dissolved		<0.05	<u> </u>

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total. Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ( $\mu g/L$ ). Metals reported in milligrams per liter ( $\mu g/L$ ).

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit.

ND = Not detected greater than the method detection limit.

NA = Not analyzed.

<sup>(1)</sup> Data suspect due to well integrity.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

										MONITORI	NG WELL	MW-14S (A	boveground	Storage Tai	nk Area)									PRG
CONSTITUENT Date Sampled	8/1988	7/23/1992	11/7/1995	8/27/1996	6/11/1997	11/18/1997	4/21/1998	10/15/1998	4/12/1999	10/14/1999	5/4/2000	10/2/2000	4/19/2001	10/30/2001	4/23/2002	10/23/2002	4/16/2003	10/15/2003	4/20/2004	10/19/2004	04/19/2005	10/13/2005	4/26/2006	(μg/L)
VOCs (µg/L)														_									<u> </u>	
Acetone	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0	<20	<20	< 20	< 20	< 20	3,650
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.617
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA	< 2.0	<2.0	< 2	< 2	< 2	l -
2-Butanone (MEK)	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	<20	<20	< 20	< 20	< 20	
n-Butylbenzene	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	<1	< 1	< 1	
Carbon Disulfide	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<20	<20	< 20	< 20	< 20	768
Chloroethane	ND	ND	5.4	22	6.6	6.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.8	<5.0	< 2.0 (J)	<2.0	< 2	< 2	< 2	l
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< <i>I</i>	< 1	0.274
Dibromomethane	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< l	
1,1-Dichloroethane	270	86	320	260	150	160	74	63	19	21	12	13	5.7	7.4	8.4	10.2	8.6	9.1	4.9	13	6.8	12	2.5	973
1,2-Dichloroethane	ND	ND	1.1	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	-
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.0167
cis-1,2-Dichloroethene	NA	NA	45	20	3.9	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	70
trans-1,2-Dichloroethene	NA	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	100
1,2-Dichloroethene, Total		Ž	45	20	3.9	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	< 1	< 1	< 1	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< l	< 1	< 1	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	700
4-Methyl-2-pentanone (MIBK)	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5	<20	<20	< 20	< 20	< 20	487
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< l	< 1	1.43
Toluene	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	1,000
1,1,1-Trichloroethane	ND	5	10	9.1	4.9	2.6	ND	ND	5.2	ND	ND	ND	14	15.1	4.7	2.0	9.5	3.5	4.3	10	10	6.8	1.5	200
1,1,2-Trichloroethane	Carlotte Co	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.314
Trichloroethene	ND	ND	3-X		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	30	<1.0	< 1	< 1	< 1	2.54
1,2,4-Trimethylbenzene	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	NA	NA	< 5	< 5	< 5	-
Vinyl Chloride	3-2-1					ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	1.3	<1.0	< 1	< 1	< 1	828
TOTAL VOCs	1,066	209	402.0	329.0	166.5	171.5	74	63	24.2	21	12	13	19.7	22.5	13.1	16.3	23.9	12.6	13.5	23	16.8	18.8	4.0	
Metals (mg/L)															-	_					-			
Arsenic, Dissolved	0.0054	0.0077	0.014	0.004	ND	ND	ND	ND	ND	0.0079	ND	0.021	ND	ND	ND	ND	< 0.10	< 0.100	0.0221	0.0136	0.0135	0.0203	<0.100	
Barium, Dissolved	0.0891	0.062	0.05	0.05	0.066	0.069	0.066	0.084	0.056	0.1	0.095	0.11	0.07	0.065	0.089	0.13	0.123	0.088	0.117	0.121	0.109	0.133	0.103	l
Cadmium, Dissolved	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.030	< 0.030	< 0.005	< 0.00100	< 0.001	< 0.001	< 0.001	l
Chromium, Dissolved total	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	< 0.040	< 0.005	< 0.0100	< 0.01	< 0.01	< 0.01	_
Cyanide, Total	0.035	0.006	ND	ND	ND	ND	0.0078	ND	0.017	ND	ND	0.009	ND	0.014	ND	ND	0.006	< 0.005	< 0.005	< 0.00500	< 0.005	< 0.005	< 0.005	
Lead, Dissolved	ND	ND	ND	0.0065	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.17	ND	< 0.080	< 0.080	< 0.005	< 0.00500	< 0.005	< 0.005	< 0.005	
Nickel, Dissolved	ND	ND	ND	0.02	0.027	0.026	0.022	ND	ND	ND	ND	0.009	0.016	0.01	0.011	0.012	< 0.010	< 0.010	0.0102	<0.0500	< 0.05	< 0.05	< 0.05	
Zinc. Dissolved	0.0035	0.021	ND	ND	0.026	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.050	< 0.050	0.0280	<0.0200	< 0.02	< 0.02	< 0.02	
Zane, Dissolved	0.0000	V•V=1															10.020	10.000	0,0200			~ ····		—

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

April 2003, October 2003, October 2004, April 2005, and October 2005 data validated to Level II: no flags were required for the data in this table collected on those dates. April 2004 data validated to Level II; (J) = estimated.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = not analyzed.

ND = Not detected greater than the method detection limit.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

					MONITORI	NG WELL MW-15S	(Aboveground Storag	e Tank Area)				PRG
CONSTITUENT	Date Sampled	8/6/1992	11/29/1995	6/12/1997	10/14/1999	10/2/2000	10/30/2001	10/23/2002	10/15/2003	10/19/2004	10/13/2005	(μg/L)
VOCs (µg/L)												
Acetone	ļ	ND	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	3,650
Benzene	l	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.617
Bromomethane	1	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	
2-Butanone (MEK)	i	ND	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	
n-Butylbenzene		NA	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	
Carbon Disulfide		ND	NA	NA	ND	ND	ND	ND	<1.0	<20	< 20	768
Chloroethane		ND	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	
Chloroform		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.274
Dibromomethane		NA	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	
1,1-Dichloroethane	]	6	5.8	4.9	ND	ND	1.5	ND	<1.0	<1.0	< 1	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.0167
cis-1,2-Dichloroethene		10	13	41	NA	ND	32.9	5.9	12.9	2.9	5.8	70
trans-1,2-Dichloroethene		ND	ND	2.5	NA	ND	2.3	ND	<1.0	<1.0	< 1	100
1,2-Dichloroethene, Tota	al	10	13	43.5	ND	ND	35.2	5.9	12.9	2.9	5.8	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	700
4-Methyl-2-pentanone (N	MIBK)	ND	NA	NA	ND	ND	ND	ND	<12.5	<20	< 20	487
Tetrachloroethene	ŕ	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< i	1.43
Toluene		ND	1.1	ND	ND	ND	ND	ND	<1.0	<1.0	<1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.314
Trichloroethene		ND	ND									2.54
1,2,4-Trimethylbenzene		NA	ND	ND	ND	ND	ND	ND	<1.0	NA	< 5	
Vinyl Chloride		ND			ND	ND	ND	ND	<1.0	<1.0	< 1	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	828
TOTAL VOCs		16	47.9	115.7	5.8	11	181.7	19.8	105.5	15.9	14.3	
Metals (mg/L)		<del>-</del>										
Arsenic, Dissolved		0.0196	ND	ND	0.0059	ND	ND	ND	< 0.100	< 0.0100	0.0135	
Barium, Dissolved		0.219	0.14	0.053	0.086	0.097	0.09	0.106	0.079	0.103	0.0939	
Cadmium, Dissolved		0.015	ND	ND	ND	ND	ND	ND	< 0.030	< 0.00100	< 0.001	
Chromium, Dissolved to	tal I	ND	0.011	ND	ND	ND	ND	ND	< 0.040	< 0.0100	< 0.01	
Cyanide, Total		ND	ND	ND	ND	ND	ND	ND	< 0.005	<0.00500	< 0.005	
Lead, Dissolved		ND	ND	0.0038	ND	ND	ND	ND	<0.080	< 0.00500	< 0.005	
Nickel, Dissolved		ND	ND	ND	ND	0.007	ND	ND	0.011	< 0.0500	< 0.05	
Zinc, Dissolved	ŀ	0.047	ND	0.055	ND	ND	ND	ND	< 0.050	0.0210	< 0.02	
Zinc, Dissolved		U.U47	NU	0.055	ND ND	מא	ND	ND	<0.050	0.0210	< 0.02	

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003, October 2004, and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

			-	_		MONITORING	G WELL MW-16S	(Aboveground Stor	age Tank Area)					PRG
CONSTITUENT	Date Sampled	8/6/1992	11/7/1995	11/6/1996	6/11/1997	10/15/1998	10/14/1999	10/2/2000	11/1/2001	10/23/2002	10/15/2003	10/19/2004	10/13/2005	(μg/L)
VOCs (µg/L)			_			<u></u>								
Acetone		ND	NA	NA	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	3,650
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.617
Bromomethane		ND	ND	NĐ	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	
2-Butanone (MEK)		ND	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	
n-Butylbenzene		NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	
Carbon Disulfide		ND	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	768
Chloroethane		ND	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.274
Dibromomethane		NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethane		55	85	26	58	37	38	ND	6.1	30.3	63.1	26	21	973
1,2-Dichloroethane		ND	1.4	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.0167
cis-1,2-Dichloroethen	e	NA		50		NA			18.5		17			70
trans-1,2-Dichloroethe	ene	NA	ND	1.3	5.3	NA	NA	ND	ND	2.5	11.0	2,2	1.1	100
1,2-Dichloroethene, T	`otal	41		51.3	80.3	130	93	93	18.5	89.9	158	75.2	94.1	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	700
4-Methyl-2-pentanone	e (MIBK)	ND	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	20.0	< 20	487
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1	1.43
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1,000
1,1,1-Trichloroethane	:	8	2.7	1	2.9	ND	6.9	ND	1.4	10.2	56.2	17	6.7	200
1,1,2-Trichloroethane	:	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.314
Trichloroethene		ND	1.0	ND	ND		ND	ND	1.0	ND	2.2	<1.0		2.54
1,2,4-Trimethylbenzer	ne	NA	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	NA	< 5	••
Vinyl Chloride								ND	ND		<1.0			0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	828
TOTAL VOCs		204	327.0	97.3	157.2	251	152.9	93	27.0	146.0	279.5	146.8	135.8	
Metals (mg/L)						·								1
Arsenic, Dissolved		0.0025	0.003	ND	ND	ND	ND	0.021	ND	ND	< 0.100	< 0.0100	< 0.01	
Barium, Dissolved		0.05	0.06	0.065	ND	0.054	0.059	0.11	0.034	0.146	0.081	0.0755	0.102	<del></del>
Cadmium, Dissolved		ND	ND	ND	0.00024	ND	ND	ND	ND	ND	<0.030	< 0.00100	< 0.001	
Chromium, Dissolved	total	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	< 0.0100	< 0.01	
Cyanide, Total		ND	ND	ND	0.011	ND	ND	0.009	ND	ND	0.021	<0.00500	< 0.005	
Lead, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.080	<0.00500	< 0.005	
Nickel, Dissolved		ND	ND	ND	ND	ND	ND	0.009	ND	ND	<0.010	< 0.0500	< 0.05	
Zinc, Dissolved		0.038	ND	ND	0.028	ND	ND	ND	ND	0.06	<0.050	< 0.0200	0.0242	
Zilic, Dissolved		*****							<del></del>		-01000		***************************************	

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003, October 2004, and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

 $\textbf{Bold} \approx \text{Analyte detected greater than the laboratory reporting limit.}$ 

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

		MONITORING WELI	MW-18S (Aboveground Storage Tank Area)	PRG
CONSTITUENT	Date Sampled	8/1/1992 <sup>(1)</sup>	11/1/2001	(μg/L)
VOCs (µg/L)				
Acetone		ND	ND	3,650
Benzene		ND	ND	0.617
Bromomethane		ND	ND	
2-Butanone (MEK)		NA	NA	<del></del>
n-Butylbenzene	1	ND	ND	<del></del>
Carbon Disulfide		ND	ND	768
Chloroethane		ND	ND	<del></del>
Chloroform		ND	ND	0.274
Dibromomethane		ND	ND	<del></del>
1,1-Dichloroethane		ND	ND	973
1,2-Dichloroethane		ND	ND	<del></del>
1,1-Dichloroethene		ND	ND	0.0167
cis-1,2-Dichloroethene		ND	ND	70
trans-1,2-Dichloroethene		ND	ND	100
1,2-Dichloroethene, Total		ND	ND	(170)
1,2-Dichloropropane		ND	ND	1.25
Ethylbenzene		ND	ND	700
4-Methyl-2-pentanone (MII	BK)	ND	ND	487
Tetrachloroethene	•	ND	ND	1.43
Toluene	•	ND	ND	1,000
1,1,1-Trichloroethane		ND	ND	200
1,1,2-Trichloroethane		ND	ND	0.314
Trichloroethene		ND	ND	2.54
1,2,4-Trimethylbenzene		ND	ND	
Vinyl Chloride	i	ND		0.0283
Xylenes, Total		ND	ND_	828
TOTAL VOCs		ND	1.6	<u>.</u>
Metals (mg/L)		-		*
Arsenic, Dissolved		ND	ND	<del></del>
Barium, Dissolved		0.177	0.084	<del></del>
Cadmium, Dissolved		ND	ND	<u></u>
Chromium, Dissolved total		ND	ND	<b></b>
Cyanide, Total		NA	NA	
Lead, Dissolved		ND	ND	
Nickel, Dissolved		ND	ND	<b></b>
Zinc, Dissolved		5.56	0.2	

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

**Bold** = Analyte detected greater than the laboratory reporting limit.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

<sup>(1)</sup> August 1992 data from Technical Memorandum (Warzyn, November 1992).

<sup>-- =</sup> No PRG assigned.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

												MONITOR	ING WELL	MW-83AS	(Southeast	Area)										PRG
CONSTITUENT 1	Date Sampled	3/1988 <sup>(1)</sup>	8/1988(1)	7/23/1992	11/08/1995	8/27/1996	6/13/1997	11/18/1997	4/21/1998	10/15/1998	4/12/1999	10/13/1999	5/04/2000	10/02/2000	4/19/2001	10/31/2001	4/23/2002	10/24/2002	4/16/2003	10/15/2003	4/20/2004	10/20/2004	4/19/2005	10/12/2005	4/26/2006	(μg/L)
VOCs (µg/L)												_						<u> </u>								
Acetone		ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<20.0	<20.0	<20	<20	< 20	< 20	< 20	3,650
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	< 1.0	<1.0	<1.0	< 1	< 1	< 1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	NA	<2.0	<2.0	< 2	< 2	< 2	
2-Butanone (MEK)	)	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<12.5	<12.5	<20	<20	< 20	< 20	< 20	
n-Butylbenzene	-	ND	ND	NA	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	
Carbon Disulfide		ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<20	<20	< 20	< 20	< 20	768
Chloroethane		ND	ND	ND	ND	ND	5.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	< 5.0	< 2.0 (J)	<2.0	2.3	2.1	< 2	
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	< 1.0	<1.0	<1.0	< 1	< 1	< 1	0.274
Dibromomethane		ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< l	< 1	
1,1-Dichloroethane	e	ND	ND	ND	48	72	51	56	ND	42	39	43	38	26	ND	31	29.1	33.3	18.1	23.7	21	23	24	19	14	973
1,2-Dichloroethane	e	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	
1,1-Dichloroethene	e	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0		< 1	< 1	0.017
cis-1,2-Dichloroeth	hene	ND	ND	NA §	Q6.55			NA	3,345		COME	3,400		1,500		** **				839 🦼				29		70
trans-1,2-Dichloroe	ethene	ND	ND	NA	68		56	NA	ND	32	21	17	14	5.9	ND	21	12.6	2.3	2.5	<1.0	1.6	1.5	2.2	1.3	< 1	100
1,2-Dichloroethene	e, Total	ND	ND						K COLUMN					1,503.4		.i.	<b>2</b> 4.			839						(170)
1,2-Dichloropropar	ne	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< l	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	700
4-Methyl-2-pentane	one (MIBK)	ND	ND	ND	NA	NA	NA	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<12.5	<12.5	<20	<20	< 20	< 20	< 20	487
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	1.43
Toluene		ND	0.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	1,000
1,1,1-Trichloroetha	ane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	200
1,1,2-Trichloroetha	ane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1	0.314
Trichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	1.0	<1.0	< 1	< 1	< 1	2.54
1,2,4-Trimethylben	nzene	ND	ND	NA	ND	ND	ND	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	NA	NA _	< 5	< 5	< 5	
Vinyl Chloride							#15 TO		N. C. C.	St. A. C.										486						0.028
Xylenes, Total		ND	ND	ND	ND	ND	ND _	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	<1.0	<1.0	<1	< 1	< 1	828
TOTAL VOCs		110	140.7	13,200	16,816	16,782	12,516.2	10,156	6,100	1,984	5,050	4,290	2,802	1,911.9	970	2,181	1,618.7	1,672.6	1,056.6	1,348.7	1,093.6	1,464.5	1,500	1,112.4	1,034.0	
Metals (mg/L)																									1	
Arsenic, Dissolved	1	ND	ND	ND	0.003	ND	0.0022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.10	< 0.100	< 0.0100	< 0.0100	0.0123	< 0.01	< 0.01	1 !
Barium, Dissolved		0.186	0.117	0.111	0.18	0.09	ND	ND	0.048	0.055	0.088	0.09	0.094	0.068	0.063	0.17	0.068	0.16	0.125	0.078	0.091	0.109	0.116	0.112	0.104	
Cadmium, Dissolve		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.030	< 0.030	<0.005	< 0.00100	< 0.001	< 0.001	< 0.001	
Chromium, Dissolv		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.040	<0.005	<0.0100	< 0.01	< 0.01	< 0.01	
Cyanide, Total		ND	0.022	0.006	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.005	0.0089	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	
Lead, Dissolved		ND	ND	ND	ND	0.011	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.18	ND	<0.080	<0.080	<0.005	<0.00500	< 0.005	< 0.005	< 0.005	
Nickel, Dissolved		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.002	ND	ND	ND	ND	<0.010	<0.010	< 0.0100	<0.0500	< 0.05	< 0.05	< 0.05	
Zinc. Dissolved		ND	0.0054	ND	ND	ND	0.041	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.063	<0.050	<0.050	< 0.0200	<0.0200	0.0314	< 0.02	< 0.02	
																				7020						

### Mana

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

April 2003, October 2003, October 2004, April 2005, October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

April 2004 data validated to Level II: (J) = estimated.

- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit,

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

<sup>(1)</sup> Possible mislabeling of sample occurred in 1988.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	T -	<del></del>	<del></del>			MONITO	DING WELL M	W-83AD (South	anst Area)						PRG
CONSTITUENT Date Sample	3/1988	8/1988	7/31/1992	11/8/1995	11/6/1996	6/13/1997	10/15/1998	10/13/1999	10/2/2000	10/31/2001	10/24/2002	10/15/2003	10/20/2004	10/12/2005	PKG (μg/L)
VOCs (µg/L)	5/1/00	0,1700	110 11 11 11	11/0/1//0	11,0,12,0	0.20.257	10/10/10	10/10/1///	10/2/2000	10/21/2001	10/24/2002	10/15/2005	10/20/2004	10/12/2002	(#g/L)
Acetone	ND	ND	ND	NA	NA	NA	NA	NA	NA	ND	ND	<20.0	<20.0	< 20	3,650
Benzene	ND ND	ND ND	ND	ND	ND	ND ND	ND ND	ND	ND	ND	ND ND	<1.0	<1.0	< 1	0.617
Bromomethane	ND ND	ND	ND	ND ND	ND	ND	ND	ND	ND	ND	ND ND	NA	<2.0	< 2	
2-Butanone (MEK)	ND ND	ND ND	ND	NA NA	NA NA	NA NA	NA	NA	NA NA	ND	ND	<12.5	<20.0	< 20	
n-Butylbenzene	ND ND	ND	NA NA	ND	NA NA	NA NA	NA NA	ND	ND ND	ND ND	ND ND	<1.0	<1.0	< 1	
Carbon Disulfide	ND ND	ND ND	ND	NA NA	NA NA	NA NA	NA NA	ND	ND	ND ND	ND ND	<1.0	<20.0	< 20	768
Chloroethane	ND	ND ND	ND ND	ND	NA NA	ND ND	ND ND	ND	ND ND	ND ND	ND	<5.0	<2.0	< 2	
Chloroform	ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND	ND	ND ND	ND	ND ND	<1.0	<1.0	< 1	 0,274
	ND ND	ND ND	NA NA	ND ND	NA NA	NA NA	NA NA	ND	ND ND	ND	ND ND	<1.0 <1.0	<1.0	i	E .
Dibromomethane 1,1-Dichloroethane	ND ND	ND ND	0.6	ND ND	1.5	NA ND	ND ND	ND ND	ND ND	ND ND	ND ND	<1.0 <1.0	<1.0 <1.0	< 1 < 1	 973
1,1-Dichloroethane	ND ND	ND ND	0.6 ND	ND ND	1.5 ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	<1.0 <1.0	<1.0 <1.0		1
1 '	ND ND		ND ND	ND ND	ND ND		ND ND		ND ND					< 1	
1,1-Dichloroethene	ND	ND NA	NA NA	ND	A STATE OF THE PARTY OF THE PAR	ND <b>60</b>	38	ND 33	ND 8.9	ND 9.3	ND	<1.0	<1.0	< 1 2	0.0167
cis-1,2-Dichloroethene	ND ND			ND	ND					9.3 ND	3.5 ND	2.4	2.2		70
trans-1,2-Dichloroethene	1	NA	NA 10	ND	ND	ND	ND	ND	NA			<1.0	<1.0	< 1 2	100
1,2-Dichloroethene, Total	ND	7.2	10	140	88 ND	60	38 ND	33	8.9 ND	9.3	3.5 ND	2.4	2.2	_	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		<1.0	<1.0	< 1	1.25
Ethylbenzene (MIDK)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	700
4-Methyl-2-pentanone (MIBK)	ND	ND	ND	NA	NA	NA	NA	ND	ND	ND	ND	<12.5	<20.0	< 20	487
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< l	1.43
Toluene	ND	0.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1,000
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	<1.0	<1.0	< 1	0.314
Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	2.54
1,2,4-Trimethylbenzene	ND	ND	NA	ND	NA	NA	NA	ND	ND	ND	ND .	<1.0	NA L	< 5	
Vinyl Chloride		CHRISTIA SALAS, NA 197 TOTAL A. A. S. A. C. SHING AND CHRISTIAN AND AND AND AND AND AND AND AND AND A										1.0	<1.0		0.0283
Xylenes, Total TOTAL VOCs	ND 4	ND 46.1	ND 13.6	ND 250	ND 163	ND 114	ND 46.8	ND 81	ND 24.9	ND 13,2	9.3	<1.0 5.8	<1.0 2.2	3.2	828
TOTAL VOCS	4	40.1	13.0	250	103	114	40.8	91	24.9	13.2	9.3	5.8	2.2	3.2	<u> </u>
Metals (mg/L)															1
Arsenic, Dissolved	NA	NA	ND	0.004	ND	ND	ND	ND	ND	ND	ND	< 0.100	< 0.0100	0.0161	
Barium, Dissolved	NA	NA	0.022	0.25	0.24	0.27	0.17	0.19	0.17	0.16	0.288	0.217	0.149	0.213	
Cadmium, Dissolved	NA	NA	0.005	ND	ND	ND	ND	ND	ND	ND	ND	< 0.030	< 0.00100	< 0.001	j
Chromium, Dissolved total	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.040	< 0.0100	< 0.01	
Cyanide, Total	NA	NA	0.07	ND	ND	0.014	ND	ND	ND	ND	ND	< 0.005	< 0.00500	< 0.005	
Lead, Dissolved	NA	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	< 0.080	< 0.00500	< 0.005	
Nickel, Dissolved	NA	NA	ND	ND	ND	ND	ND	ND	0.004	ND	ND	< 0.010	< 0.0500	< 0.05	
Zinc, Dissolved	NA	NA	ND	0.01	ND	0.02	0.022	0.02	ND	0.069	0.057	< 0.050	0.0287	< 0.02	

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003, October 2004, and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

				<del></del>		MONI	ITORING WELL M	IW 92D (Northogo	4 4-22					PRG
CONSTITUENT	Date Sampled	3/1988	7/31/1992	6/7/1996	11/6/1996	6/12/1997	10/15/1998	10/2/2000	10/31/2001	10/23/2002	10/15/2003	10/20/2004	10/12/2005	PRG (μg/L)
	Date Sampleu	3/1766	113111772	0///1///	11/0/1770	0/12/1/2/	10/13/1//0	10/2/2000	10/31/2001	10/23/2002	10/10/2003	10/20/2004	10/12/2003	(µg/L)
VOCs (µg/L)	j	270	ND.	MD	374	37.4	N/D	) ID	) ID	ND.	~20 a	20.0	- 20	2.50
Acetone		270	ND	ND	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	3,650
Benzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	NA 12.5	<2.0	< 2	
2-Butanone (MEK)		23	ND	ND	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	
n-Butylbenzene	1	ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	<1.0	<1	
Carbon Disulfide		ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	768
Chloroethane		ND	ND	ND	NA	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	
Chloroform		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.274
Dibromomethane		ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethane	1	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	973
1,2-Dichloroethane	J	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	] ]
1,1-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.0167
cis-1,2-Dichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< l	70
trans-1,2-Dichloroethe		ND	NA	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	100
1,2-Dichloroethene, To	otal	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	700
4-Methyl-2-pentanone	(MIBK)	ND	ND	ND	NA	NA	ND	ND	ND	ND	<12.5	<20.0	< 20	487
Tetrachloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.43
Toluene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	200
1,1,2-Trichloroethane	j	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.314
Trichloroethene		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	2.54
1,2,4-Trimethylbenzen	ie	ND	NA	ND	NA	NA	ND	ND	ND	ND	<1.0	NA	< 5	
Vinyl Chloride		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	828
TOTAL VOCs		293	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Metals (mg/L)							-							
Arsenic, Dissolved		ND	ND	0.003	0.0031	0.0027	ND	0.0054	ND	ND	< 0.100	< 0.0100	< 0.01	
Barium, Dissolved		ND	ND	0.16	0.22	0.19	0.16	0.26	0.18	0.227	0.257	0.225	0.203	
Cadmium, Dissolved		ND	0.005	ND	ND	ND	ND	ND	ND	ND	< 0.030	< 0.00100	< 0.001	
Chromium, Dissolved	total	ND	ND	ND	ND	ND	ND	ND	ND	ND	<0.040	<0.0100	< 0.01	
Cyanide, Total	·····	ND	0.019	ND	ND	ND	ND	ND	ND	ND	0.0059	<0.00500	< 0.005	
Lead, Dissolved		ND	ND	ND	ND	ND ND	ND	ND	ND	ND	< 0.080	<0.00500	< 0.005	
Nickel, Dissolved		ND ND	ND ND	0.02	0.021	ND ND	ND	ND	ND	ND	<0.010	<0.0500	< 0.05	
Zinc, Dissolved		ND ND	ND	0.1	0.021	0.029	ND	ND	ND ND	ND ND	< 0.050	0.0252	0.027	
Zinc, Dissoived		אט	ND	V. I	0.001	0.029	- ND	ND	עא	ND	<0.030	U.U.Z.3.L	U.U2/	

Table 3 (MW data).xls

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003, October 2004, and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

**Bold** = Analyte detected greater than the laboratory reporting limit.

16/18

Italics = Reporting limit greater than the corresponding PRG.

ND = Not detected greater than the method detection limit.

<sup>-- =</sup> No PRG assigned.

<sup>&</sup>lt; = Not detected greater than the reporting limit provided.

NA = Not analyzed.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

	<del></del> -		<del></del>	MONITORING WE	LL MW-83DS (Formerly GW-8	33E; Southeast Area)			PRG
CONSTITUENT	Date Sampled	8/1988	11/1/2001	4/23/2002	10/24/2002	10/17/2003	10/22/2004	10/14/2005	(μg/L)
VOCs (µg/L)			<del></del>						
Acetone		ND	ND	ND	ND	<20.0	<20.0	< 20	3,650
Benzene		ND	ND	ND	ND	<1.0	<1.0	< 1	0.617
Bromomethane		ND	ND	ND	ND	NA	<2.0	< 2	
2-Butanone (MEK)		ND	NA	NA	NA	14.4	<20.0	< 20	
n-Butylbenzene		ND	ND	ND	ND	<1.0	<1.0	<1	
Carbon Disulfide		ND	ND	ND	ND	<1.0	<20.0	< 20	768
Chloroethane		ND	ND	ND	ND	<5.0	<2.0	< 2	<u> </u>
Chloroform		ND	ND	ND	ND	<1.0	<1.0	< 1	0.274
Dibromomethane		ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethane		ND	1.1	ND	ND	<1.0	<1.0	< 1	973
1,2-Dichloroethane		ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethene		ND	ND	ND	ND	<1.0	<1.0	< 1	0.0167
cis-1,2-Dichloroethene		ND		33 <b>6</b> 336 34 34 34 34 34 34 34 34 34 34 34 34 34					70
trans-1,2-Dichloroethene		ND	1.1	ND	ND	1.1	<1.0	< 1	100
1,2-Dichloroethene, Total		ND	192	3507.4				110	(170)
1,2-Dichloropropane		ND	ND	ND	1.0	<1.0	<1.0	< 1	1.25
Ethylbenzene		ND	ND	ND	ND	<1.0	<1.0	< 1	700
4-Methyl-2-pentanone (MI	BK)	ND	ND	ND	ND	<12.5	<20.0	< 20	487
Tetrachloroethene		ND	ND	ND	ND	<1.0	<1.0	< 1	1.43
Toluene		ND	ND	ND	ND	<1.0	<1.0	< 1	1,000
1,1,1-Trichloroethane		ND	ND	ND	ND	<1.0	<1.0	< 1	200
1,1,2-Trichloroethane		ND	ND	ND	ND	<1.0	<1.0	< 1	0.314
Trichloroethene		ND	ND	ND	ND	<1.0	<1.0	< 1	2.54
1,2,4-Trimethylbenzene		ND	ND	ND	ND	<1.0	NA	< 5	
Vinyl Chloride		ND							0.0283
Xylenes, Total		ND	ND_	ND	ND	<1.0	<1.0	<1	828
TOTAL VOCs		ND	209.2	470	509	334.4	266	164	
Metals (mg/L)									1
Arsenic, Dissolved		0.003	ND	ND	ND	< 0.100	<0.0100	< 0.01	
Barium, Dissolved		0.211	0.077	0.12	0.153	0.106	0.0947	0.139	
Cadmium, Dissolved		ND	ND	ND	ND	< 0.030	< 0.00100	< 0.001	
Chromium, Dissolved total	Ī	ND	ND	ND	ND	<0.040	< 0.0100	< 0.01	
Cyanide, Total		ND	NA	NA	NA	NA	NA	NA	
Lead, Dissolved		ND	ND	0.16	ND	< 0.080	< 0.00500	< 0.005	J
Nickel, Dissolved		ND	ND	ND	ND	< 0.010	<0.0500	< 0.05	
Zinc, Dissolved		ND	0.062	ND	ND	< 0.050	< 0.0200	< 0.02	<b>i</b>
				<del></del>					<del>-</del>

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total.

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

Metals reported in milligrams per liter (mg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003, October 2004, and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

-- = No PRG assigned.

< = Not detected greater than the reporting limit provided.

**Bold** = Analyte detected greater than the laboratory reporting limit.

Italics = Reporting limit greater than the corresponding PRG.

NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table 3
Monitoring Well Analytical Results
Wayne Reclamation & Recycling

		MONITORING WELL MW-83DD	(Formerly GW-83D; Southeast Area)	PRG
CONSTITUENT	Date Sampled	8/1988	11/6/2001	(μg/L)
VOCs (µg/L)				
Acetone		ND	ND	3,650
Benzene		ND	ND	0.617
Bromomethane		ND	ND	
2-Butanone (MEK)		ND	NA	
n-Butylbenzene		ND	ND	<del></del>
Carbon Disulfide		ND	ND	768
Chloroethane	Ì	ND	ND	
Chloroform		ND	ND	0.274
Dibromomethane	j	ND	ND	
1,1-Dichloroethane	1	ND	ND	973
1,2-Dichloroethane	ĺ	ND	ND	<del></del>
1,1-Dichloroethene		ND	ND	0.0167
cis-1,2-Dichloroethene		ND	ND	70
trans-1,2-Dichloroethene	j	ND	ND	100
1,2-Dichloroethene, Total	i	ND	ND	(170)
1,2-Dichloropropane		ND	ND	1.25
Ethylbenzene		ND	ND	700
4-Methyl-2-pentanone (MIB	3K)	ND	ND	487
Tetrachloroethene	, i	ND	ND	1.43
Toluene		ND	ND	1,000
1,1,1-Trichloroethane		ND	ND	200
1,1,2-Trichloroethane	ł	ND	ND	0.314
Trichloroethene		ND	ND	2.54
1,2,4-Trimethylbenzene		ND	ND	
Vinyl Chloride		ND	ND	0.0283
Xylenes, Total		ND	ND	828
TOTAL VOCs		ND	ND ND	
Metals (mg/L)				
Arsenic, Dissolved	1	0.057	ND	
Barium, Dissolved	l	0.009	0.05	
Cadmium, Dissolved	l	ND	ND	<del></del>
Chromium, Dissolved total	İ	ND	ND	<u></u>
Cyanide, Total	ł	0.022	NA	<del></del>
Lead, Dissolved		0.0023	ND	• <del>•</del>
Nickel, Dissolved	1	ND	ND	<del></del>
Zinc, Dissolved	l	0.004	ND	<del></del>

In samples where total 1,2-dichloroethene has been listed, cis-1,2-dichloroethene is included in that total. Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter ( $\mu$ g/L). Metals reported in milligrams per liter ( $\mu$ g/L).

**Bold** = Analyte detected greater than the laboratory reporting limit. NA = Not analyzed.

ND = Not detected greater than the method detection limit.

Table 4
Groundwater Treatment System Flow Summary
Wayne Reclamation & Recycling

		nuary 2006		ruary 006	1	farch 2006		April 2006	ı	———— 1ay 006	1	une 006
		FLOW		FLOW		FLOW		FLOW		FLOW	-	FLOW
	DATE	(gpd)	DATE	(gpd)	DATE	(gpd)	DATE		DATE	(gpd)	DATE	(gpd)
	1	102,000	1	128,200	ı	69,400	1	129,700	1	71,300	1	97,300
	2	102,000	2	116,600	2	69,400	2	129,700	2	71,400	2	82,900
	3	101,200	3	116,600	3	69,400	3	136,700	3	71,400	3	97,300
	4	102,000	4	116,600	4	69,400	4	136,700	4	71,400	4	97,300
	5	102,000	5	116,600	5	69,400	5	136,700	5	71,400	5	97,300
	6	102,000	6	116,600	6	72,300	6	135,900	6	71,400	6	97,300
	7	102,000	7	72,300	7	72,300	7	135,700	7	71,400	7	70,700
	8	102,000	8	72,300	8	72,300	8	136,700	8	77,600	8	70,700
	9	92,700	9	72,300	9	72,300	9	136,700	9	78,300	9	70,700
	10	114,500	10	70,100	10	69,900	10	132,900	10	78,300	10	70,700
	11	114,500	11	72,300	11	72,300	11	133,800	11	78,300	11	70,700
	12	84,100	12	72,300	12	72,300	12	133,800	12	78,300	12	70,700
	13	114,500	13	72,300	13	98,200	13	133,600	13	78,300	13	96,800
	14	114,500	14	72,300	14	98,200	14	133,800	14	78,300	14	96,800
	15	114,500	15	75,600	15	98,200	15	133,800	15	78,200	15	96,800
	16	114,500	16	78,200	16	98,200	16	133,800	16	77,600	16	96,800
	17	125,100	17	78,200	17	98,200	17	133,800	17	79,100	17	96,800
	18	125,100	18	78,200	18	98,200	18	156,400	18	78,000	18	96,800
	19	125,100	19	78,200	19	98,200	19	156,400	19	79,100	19	96,800
	20	125,100	20	69,300	20	84,200	20	156,400	20	79,100	20	96,800
	21	125,100	21	69,300	21	84,200	21	156,400	21	79,100	21	96,800
	22	125,100	22	69,300	22	84,200	22	156,400	22	70,800	22	115,500
	23	125,000	23	69,300	23	81,500	23	156,400	23	57,300	23	115,500
	24	125,100	24	69,300	24	84,200	24	156,400	24	57,300	24	115,500
	25	125,100	25	69,300	25	84,200	25	107,000	25	57,300	25	115,500
	26	125,100	26	69,300	26	84,200	26	107,000	26	57,300	26	115,500
	27	125,100	27	69,400	27	82,000	27	107,000	27	57,300	27	115,500
	28	125,100	28	69,400	28	129,700	28	107,000	28	57,300	28	123,700
	29	125,100			29	129,700	29	107,000	29	60,900	29	123,700
	30	125,100			30	129,700	30	107,000	30	62,600	30	123,700
	31	127,700			31	129,700			31	62,600		
Total Monthly Flow (gallons)		3,558,000		2,299,700		2,725,600	_	4,020,600		2,198,000		2,928,900
Average Daily Flow (gallons)		114,800		74,184		90,853	1	129,697		73,267		94,481
Total Plant Run Time (minutes)		43,973		40,228		44,508		43,171		44,372		42,987
Av. Flow During Actual Plant Run Time (gpm)		81		57		61		93		50		68

Period	Total Gallons Treated
6 Months	17,730,800
12 Months	36,852,200
Since 1995	279,603,541

gpd = Gallons per day.

Av. = Average.

gpm = Gallons per minute.

Av. Flow is calculated by dividing the total monthly flow by the total number of operational days for the given month.

Table 5
Summary of Monitoring Well Construction Details
Wayne Reclamation & Recycling

	TOIC	Grd Surface	Total	Well	Screen	Bottom Screen	Top Screen	Slot			
Well	Elevations	Elevation	Depth	Diameter	Length	Elevation	Elevation	Size	General	Well	Installation
Identification	2001 - 2003	(msl)	(bgs)	(inches)	(feet)	(msl)	(msl)	(inches)	Location	Installer	Date
MW-1D	826.08	823.81	150.00	2.00	10.00	673.81	683.81	0.010	Southeast Area	Montgomery Watson	June-96
MW-2S	825.34	822.90	23.00	2.00	10.00	799.90	809.90	0.010	Southeast Area	Warzyn	February-88
MW-3S	824.06	820.82	20.00	2.00	10.00	800.82	810.82	0.010	Southeast Area	Warzyn	February-88
MW-4S	843.06	840.04	37.00	2.00	10.00	803.04	813.04	0.010	RW-4 Area	Warzyn	February-88
MW-5S	833.02	830.19	25.00	2.00	10.00	805.19	815.19	0.010	Cemetery	Warzyn	February-88
MW-7S	836.12	833.70	31.00	2.00	10.00	802.70	812.70	0.010	RW-4 area	Warzyn	February-88
MW-8S	835.52	832.11	30.00	2.00	10.00	802.11	812.11	0.010	AST area	Warzyn	February-88
MW-8D	834.11	831.57	150.00	2.00	10.00	681.57	691.57	0.010	AST Area	Warzyn	August-88
MW-9S	825.44	822.43	20.00	2.00	10.00	802.43	812.43	0.010	AST Area	Warzyn	February-88
MW-10S	823.15	821.66	16.00	2.00	10.00	805.66	815.66	0.010	Southeast Area	Warzyn	February-88
MW-11S	825.08	823.26	34.00	2.00	10.00	789.26	799.26	0.010	Southeast Area	Warzyn	February-88
MW-13S (1)	826.40	823.58	25.00	2.00	10.00	798.58	808.58	0.010	Southeast Area	Warzyn	July-88
MW-13D (1)	826.44	823.86	145.00	2.00	10.00	678.86	688.86	0.010	Southeast Area	Warzyn	July-88
MW-14S	821.30	819.11	18.90	2.00	10.00	800.21	810.21	0.010	AST Area	Warzyn	July-88
MW-15S	827.64	825.00	25.00	2.00	10.00	800.00	810.00	0.010	AST Area	Warzyn	July-90
MW-16S	827.41	825.23	25.00	2.00	10.00	800.23	810.23	0.010	AST Area	Warzyn	July-90
MW-17S	826.56	824.66	40.00	2.00	10.00	784.66	794.66	0.007	AST Area	Warzyn	August-92
MW-18S	824.16	821.54	32.50	2.00	10.00	789.04	799.04	0.007	AST Area	Warzyn	July-92
MW-19S <sup>(1)</sup>	832.07	830.20	25.00	2.00	10.00	805.20	815.20	0.010	AST Area	Warzyn	July-92

TOIC = Top of inner well casing: msl = above mean sea level; bgs = below ground surface; AST = Aboveground Storage Tank; MW = monitoring well; RW = recovery well.

Depth to groundwater measured in feet below TOIC.

Prior to 2001, TOIC elevations based on Ayres-Lewis-Norris-May, Inc. survey of 10/10/1997.

TOIC and surface elevations based on Benchmark Surveying. Inc. surveys of 7/2/2001, 10/25/2001, and 5/1/2003, except where noted.

TOIC elevations based on InSite, Inc. survey of 7/2/2002, following repair of those wells.

Table 5
Summary of Monitoring Well Construction Details
Wayne Reclamation & Recycling

	TOIC	Grd Surface	Total	Well	Screen	Bottom Screen	Top Screen	Slot			
Well	Elevations	Elevation	Depth	Diameter	Length	Elevation	Elevation	Size	General	Well	Installation
Identification	2001 - 2003	(msl)	(bgs)	(inches)	(feet)	(msl)	(msl)	(inches)	Location	Installer	Date
P-1	834.28	832.29	28.00	2.00	10.00	804.29	814.29	0.010	RW-4 Area	Warzyn	July-88
P-2	825.49	822.90	18.00	2.00	10.00	804.90	814.90	0.010	Southeast Area	Warzyn	July-88
P-3	823.48	820.82	20.00	2.00	10.00	800.82	810.82	0.010	Southeast Area	Warzyn	July-88
P-4	822.67	820.01	15.00	2.00	10.00	805.01	815.01	0.010	AST Area	Warzyn	July-88
MW-83AS (2)	826.13	824.39	28.22	2.00	5.00	796.17	801.17	-	Southeast Area	Peerless - Midwest	May-83
MW-83AD (2)	826.15	824.36	46.95	2.00	4.00	777.41	781.41	-	Southeast Area	Peerless - Midwest	May-83
MW-83B	840.55	838.30	60.00	2.00	9.70	778.30	788.00	0.010	Southeast Area	Montgomery Watson	June-96
MW-83DS (2)	825.21	823.75	36.40	2.00	2.00	787.35	789.35	-	Southeast Area	Peerless - Midwest	May-83
MW-83DD (2)	825.30	823.82	52.93	2.00	0.50	770.89	771.39	-	Southeast Area	Peerless - Midwest	May-83
GM-1 (3)	841.08	838.98	34.84	2.00	-	804.14	-	-	Landfill	G&M	-
GM-2 (3)	833.30	830.51	38.86	2.00	-	791.65	-	-	Landfill	G&M	-
GM-3 (3)	822.87	820.65	27.75	2.00	-	792.90	-	-	Landfill	G&M	-
GM-4 (1)	827.40	824.11	27.95	2.00	-	796.16	-	-	Landfill	G&M	-
PZ-1 (4)	823.66	821.00	26.00	2.00	5.00	795.00	800.00	0.010	AST Area	MWH	December-02
PZ-2 (4)	825.73	823.80	17.00	2.00	5.00	806.80	811.80	0.010	Southeast Area	MWH	December-02
PZ-3 <sup>(4)</sup>	826.46	823.10	20.00	2.00	5.00	803.10	808.10	0.010	Southeast Area	MWH	December-02
PZ-4 (4)	825.52	821.45	17.00	2.00	5.00	804.45	809.45	0.010	RW-5 Area (Landfill)	MWH	December-02

TOIC = Top of inner well casing; msl = above mean sea level; bgs = below ground surface; AST = Aboveground Storage Tank; MW = monitoring well; RW = recovery well; P and PZ = piezometer.

Depth to groundwater measured in feet below TOIC.

Prior to 2001, TOIC elevations based on Ayres-Lewis-Norris-May, Inc. survey of 10/10/1997.

TOIC and surface elevations based on Benchmark Surveying, Inc. surveys of 7/2/2001, 10/25/2001, and 5/1/2003, except where noted.

<sup>&</sup>lt;sup>(2)</sup> Total depth and screen length revised based on InSite, Inc. field documentation study on 7/17/02.

<sup>13</sup> Groundwater elevations estimated for GM-1 through GM-4 for April 2001 reading; that same value is used for April 2003.

<sup>&</sup>lt;sup>(4)</sup> Groundwater elevations from first round of measurements following piezometer installation, on 1/14/2003.

<sup>- =</sup> No data available.

Table 6
Summary of Groundwater Elevations
Wayne Reclamation & Recycling

	Date:	07/15/2005	08/26/2005	09/29/2005	10/11/2005	11/03/2005	12/01/2005	01/09/2006	02/10/2006	03/15/2006	04/25/2006	05/22/2006	06/15/2006
Well	TOIC Elevation					Groundwa	ater Elevation wi	th Air Sparging	System On				
Identification	2001 - 2003						(feet above m	ean sea level)		_			
MW-1D	826.08				807.49						809 60		
MW-2S	825.34	807.67	807.58	806.91	807.53	807.43	807.13	807.43	806.94	807.63	808 24	808.75	808.77
MW-3S	824.06	806.99	807.07	807.36	807.41	807.28	806.94	807.06	807.29	807.85	808.67	809.80	808.92
MW-4S	843.06				809.35						810.29		
MW-5S	833.02		'-		810.50						811.76		
MW-7S	836.12		-		809.05						809 85		
MW-8S	835.52		- "		809.29						810.69		
MW-8D	834.11				807.75	]	'				807.32		
MW-9S	825.44	810.07			808.79				·		810.00		
MW-10S	823.15	807.33	807.25	807.27	807.23	807.22	806.94	807.04	807.21	807.77	808.66	809.48	809.09
MW-IIS	825.08	807.58	807.76	807.44	807.73	807.68	807.19	807.51	807.42	808.06	808.73	808.48	807.40
MW-13S	826.40	810.84	810.75	810.76	810.69	810.61	810.63	810.85	811.12	812.80	811.01	811.87	811.13
MW-13D	826.44				808.38						807,60		
MW-14S	821.30		j		809.93	<u></u>		J			810.79		
MW-15S	827.64		'		809.26						810.63		
MW-16S	827.41				809.40						810.76	I	
MW-17S	826.56	••			809.92			I			811.26		
MW-18S	824.16				809.98						810.68		I
MW-19S	832.07				809.55					· · · ·	810.94		
P-1	834.28				809.33			I			810.49		
P-2	825.49				809.54	· ·					810.53		
P-3	823.48				808.99						810.38		
P-4	822.67				808.91						810.31		
MW-83AD	826.15	808.76	809.10	808.79	808.36	808.71	807.85	808.43	808.84	809.73	809.35	809.76	809.20
MW-83AS	826.13	807.57	807.52	806.86	807.43	807.34	807.07	807.35	806.89	807.57	808.18	808.74	808.73
MW-83B	840.55				809.35						809.38		
MW-83DD	825.30				809.86						809.77		
MW-83DS	825.21	809.91	810.10	809.93	809.70	809.75	809.22	809.79	810 18	811.57	809.66	810.72	810.84
GM-3	822.87	810.28											
GM-4	827.40	809.92											
PZ-1	823.66	810.03				I				I			
PZ-2	825.73	810.82				[				l	I		
PZ-3	826.46	810.59			I : :								
PZ-4	825.52	810.28			[ : : : : : : : : : : : : : : : : : :								
G-1	808.82	810.10							-				I
G-2	810.10	810.98						=					
G-3	809.91	811.03		-				-					
G-4	810.21	811.05											
RW-1	818.45				804.73		-				810.23		
RW-2	824.29				809.37						810.85		
RW-3	822.71	806.68			808.03						803.38		
RW-4	833.24				805.16						807.86		
RW-5	823.94	804.97			799.06						810.69		
RW-6	820.71				805.02						805.19		
RW-7	820.21			_	805.28						806.94		
RW-8	821.86			-	802.84				-		807.71		
RW-9	821.69			-	809.44						808.52		
RW-10	822.55				806.00						801.72		

TOIC = Top of inner well casing; MW = monitoring well; P and PZ = piezometer; GM = landfill well, G = river gauge point; RW = recovery well.

TOIC and surface elevations based on Benchmark Surveying. Inc. surveys of 7/2/2(01), 10/25/2001, and 5/1/2003, except where noted

TOIC elevations based on InSite, Inc. survey of 7/2/2002, following repair of those wells.

Table 7 Columbia City Municipal Water Supply Well Results - Volatile Organic Compounds and Polychlorinated Blphenyls
Wayne Reclamation & Recycling

Date Sampled:	10/14	/1998	12/9/	1999	10/3	/2000	10/31	/2001	10/2.	V2002	10/16	/2003	10/22	/2004	10/18	3/2005	1/13/2006
CONSTITUENT	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-8
VOCs (µg/L)						-											
Benzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1
Bromodichloromethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	< 1	< 1
Bromoform	<5.0	<5.0	<5.0	<5.0	<5.0	   <5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1
Bromomethane	<10	<10	<10	<10	<10	<10	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	< 2	< 2	< 2
2-Butanone (MEK)	<50	<50	<50	<50	<50	<50	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<20	<20	< 20	< 20	< 20
Carbon Disulfide	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<20	<20	< 20	< 20	< 20
Carbon Tetrachloride	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1
Chlorobenzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	< 1	< i
Chlorodibromomethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	0.1	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA
Chloroethane	<10	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	   <5.0	<5.0	<5.0	<2.0	<2.0	< 2	< 2	< 2
Chloroform	<5.0	<5.0	<20	<20	<20	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1
Chloromethane	<10	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	< 2	< 2	< 2
1,1-Dichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< l	<1
1,2-Dichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< i	< I
1,1-Dichlororethene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	< I	< 1
cis-1,2-Dichloroethene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< l	1.4*	< l
trans-1,2-Dichloroethene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< l	< 1	< 1
1,2-Dichloropropane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< l	< 1	<1
cis-1,3-Dichloropropene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<	< l	< I
trans-1,3-Dichloropropene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	< ì	< 1
Ethylbenzene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	< 1	< 1
2-Hexanone	<50	<50	<50	<50	<50	<50	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<20	<20	< 20	< 20	< 20
Methylene Chloride	<10	<10	<10	<10	<10	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5	< 5	< 5
4-Methyl-2-pentanone (MIBK)	<50	<50	<50	<50	<50	<50	<12.5	<12.5	<12.5	<12.5	<12.5	<12.5	<20	<20	< 20	< 20	< 20
Styrene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	< I	< 1
Tetrachloroethene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< I	< 1
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< l	< I	< 1
1,1,1-Trichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< l	< 1	< 1
1.1.2-Trichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< 1	< 1	< 1
Trichloroethene	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	< 1	<1
Vinyl Chloride	<2	<2	<5.0	<5.0	<2.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	< I	· <1	< 1
Xylenes, Total	<5.0	<5.0	<5.0	<5.0_	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	· <1	<1
PCBs (ug/L)		j														į	
Aroclor 1016	<1	<1	ÑΑ	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1221	<1	<1	NA	NA	NA	NA	NA	NA	NA	. NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1232	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1242	<1	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NΑ	NA	NA
Aroclor 1248	< l	<b>&lt;</b> l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1254	<1	<l< td=""><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td></l<>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aroclor 1260	<1	<i< td=""><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>NA_</td><td>NA</td><td>NA</td><td>N<sub>A</sub></td></i<>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA_	NA	NA	N <sub>A</sub>

Volatile organic compounds (VOCs) and polychlorinated hiphenyls (PCBs) reported in micrograms per liter (µg/L). PW = Public well.

< = Not detected above the reporting limit provided. NA = Not analyzed

October 2002 and 2003 data validated to Level IV; no flags were required for the data in this table collected on those dates.

October 2004, October 2005, and January 2006 data validated to Level II: no flags were required for the data in this table collected on those dates.

\* The detection of cis-1,2-dichloroethene in PW-8 on 10/18/05 is considered a laboratory artifact from previous analyses.

Table 8

Columbia City Municipal Water Supply Well Results - Metals and Inorganics

Wayne Reclamation & Recycling

Date Sampled:	10/14	/1998	12/9/	1999	10/3	/2000	10/31	/2001	10/23	V2002	10/16	5/2003	10/22	2/2004	10/18	3/2005
CONSTITUENT	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8	PW-7	PW-8
Total Metals (mg/L)																
Aluminum	<0.10	<0.10	<0.10	<0.10	<0.10	: <0.10	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.200	<0.200	<0.200	<0.200
Antimony	<0.005	<0.005	<0.005	<0.005	<0.026	<0.026	<0,0010	<0.0010	<0.0010	<0.0010	<0.100	<0.100	<0.006	<0.006	<0.006	<0.006
Arsenic	0.0083	0.0071	0.0091	0.0056	<0.028	<0.028	0.0087	0.0062	0.0087	0.0066	<0.100	<0.100	<0.010	<0.010	<0.010	0.0106
Barium	0.15	0.13	0.12	0.11	0.15	0.13	0.161	0.138	0.150	0.132	0.155	0.135	0.144	0.138	0.164	0.143
Beryllium	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.0010	<0,0010	<0.(X).(0>	<0.0010	<0.005	<0.005	<0.004	<0.004	<0.004	d0.004
Cadmium	<0.005	<0.005	<0.010	<0.010	<0.005	<0.005	<0.0010	<0.0010	<0,0010	<0.0010	<0.030	<0.030	<0.005	<0.005	<0.005	<0.005
Calcium	86	83	70	67	87	80	80.2	75.8	89.8 (3)	92.9	95.0	84.5	79	80.4	95.4	89.4
Chromium	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0020	<0.0020	<0.0020	<0.0020	<0.040	<0.040	<0.010	<0.010	<0.010	<0.010
Cobalt	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.0050	<0.0050	<0.0050	<0.0050	<0.020	<0.020	<0.005	<0.005	<0.005	<0.005
Соррег	<0.010	<0.010	<0.010	<0.010	<0.005	<0.005	<0.0050	<0.0050	<0.0050	d).0050	<0.020	<0.020	<0.005	<0.005	<0.005	<0.005
fron	2	1.6	1.6	1.4	1.8	1.5	1.82	1.5	1.85	1.66	2.15	1.67	1.79	1.6	2.02	1.64
Lead	<(),(X)5	<0.005	<0.005	<0.005	<0.018	<0.018	<0.0010	<0.0010	<0.0010	<0.0010	<0.080	<0.080	<0.015	<0.015	<0.015	<0,015
Magnesium	35	36	28	29	34	34	32.1	32.8	33.7 (J)	36.7	38.1	36.0	30.9	34,1	36.5	36
Manganese	0.16	0.14	0.11	0.12	0.12	0.13	0.109	0.114	0.112	0.119	0.137	0.143	0.111	0.134	0.123	0.135
Mercury	<1),(XX)15	<0.0005	<(),()())5	<0.0005	<0.0005	<0.0005	<0,0002	<0),00002	<().(XX)2	<0.0002	<0.0002	<0.0002	<0.002	<0.002	<0.002	<0.002
Molybdenum	0.023	0.031	0.025	0.031	<0.020	0.021	<0.020	0.021	NA	NA	0.036	0.043	NA	NA	NA	· NA
Nickel	<0.020	< 0.020	<0.020	<0.020	<0.002	<0.0068	<0.0050	<0,0050	<0.0050	<0.0050	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Potassium	1.4	1.5	<5.0	<5.0	<5.0	<5.0	1.6	1.8	1.8	2.4	1.90	2.00	1.59	1.87	1.93	2.11
Selenium	<0.005	<0.005	<0.005	<0.005	<0.036	<0.005	<0.20	<0.20	<0,0050	<0.0050	<0.100	<0.100	<0.050	<0.050	<0.050	<0.050
Silver	<0.020	<0.020	<0.020	<0.020	<0.005	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.040	<0.040	<0.010	<0.010	<0.010	<0.010
Sodium	13	17	11	13	14	17	14	15.8	12.8	17.7	16.1	18.4	12.8	17	15.2	18.3
Thallium	<0.002	<0.002	<0.002	<0.002	<0.002	<1).(X)2	<0.0100	<0.0100	<0.0010	<0.0010	<0.010	<0.010	<0.002	<0.002	<0.002	<0,002
Vanadium	<0.02	<0.02	<0.020	<0.020	<0.02	<0.02	<0.050	<0.050	<0.0050	<0,0050	<0.050	<0.050	<0.010	<0.010	<0.010	<0.010
Zinc	0.024	<0.020	<0.020	<0.020	<0.020	0.04	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.020	<0.020	<0.020	<0.020
Inorganics/Wet Chemistry (mg/L)										l :						 
Ammonia Nitrogen	0.38	0.41	NA	NA	NA	NA	NA	NA	NΑ	NA	NA	NA.	NA	NA	NA	NA
Biological Oxygen Demand	<5	<5	NA	NA	NA	NA.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	<10	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate Nitrogen	<0.02	<0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrite Nitrogen	0.021	0.022	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oil & Grease	<5	<5	NA ·	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NΑ
Surfactants (MBAs)	0.10	<0.1	NA	NA	NA	NA	NA	NA	N.A	NA NA	NA	NA	NA	NA	NA	NA
Total Cyanide	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Kjeldahl Nitrogen	0.64	0.73	NA	NA	NA	NA	NA	NA	NA	NA	NΑ	NA	NA	NA	NA	NA
Total Phenols	<0.010	<0.010	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Phosphorus	<0,05	<0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA.
Total Suspended Solids	<5	ধ	NA	NA	NA	NA	NA	NA	NA	NA	NA_	NA	NA	NA	ŅΑ	NA

Total metals and inorganic/wet chemistry parameters reported in milligrams per liter (mg/L).

PW = Public well.

< = Not detected above the reporting limit provided.

**Bold** = Analyte detected above the laboratory reporting limit.

NA = Not analyzed.

October 2002 data was validated to Level IV; (J) = estimated

October 2003 data validated to Level IV, no flags were required for the data in this table collected on that date

October 2004 and October 2005 data validated to Level II, no flags were required for the data in this table collected on those dates.

Table 9 **Recovery Well Analytical Results** Wayne Reclamation & Recycling

			R	ECOVERY WE	ELL RW-1 (Al	boveground St	orage Tank Are	·a)			PRG
CONSTITUENT Date Sampled:	8/27/1996	11/6/1996	6/11/1997	11/18/1997	4/21/1998	11/1/2001	10/25/2002	12/22/2003	10/22/2004	10/11/2005	(µg/L)
VOCs (μg/L)		<del></del>				<del></del>					
Acetone	NA	NA	NA	NA	ND	ND	ND	<20.0	<20.0	< 20	3,650
Benzene	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.617
Bromomethane	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	1
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	ND	<12.5	<20.0	< 20	
n-Butylbenzene	ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	< 1	
Carbon Disulfide	NA	NA	NA	NA	ND	ND	ND	<1.0	<20.0	< 20	768
Chloroethane	ND	2.4	2.2	3.7	ND	ND	ND	< 5.0	2.4	< 2	
Chloroform	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.274
Dibromomethane	ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	< 1	
1.1-Dichloroethane	170	180	110	190	140	103	11	73.7	100	26	973
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.0167
cis-1,2-Dichloroethene	240,	180	*** 190 · ``	230	200	119	1,100	85	84	22	70
trans-1,2-Dichloroethene	ND	1.4	1.4	2,9	ND	1.3	13	<1.0	<1.0	< 1	100
1,2-Dichloroethene, Total	240	181.4	191.4	232.9	200	120.3	1,113	85	84	22	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	700
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	ND	<12.5	<20.0	< 20	487
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.43
Toluene	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1,000
1,1,1-Trichloroethane	22	23	20	31	19	12.7	12.7	14.7	17.0	7	200
1.1.2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.314
Trichloroethene	ND	ND	ND	ND	ND	2.4	240	9.2	4.3	13	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	ND	<1.0	NA	< 5	
Vinyl Chloride	170	ND	100	140	80	54.8	60	40.2	38	9.1	0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND _	<1.0	<1.0	< 1	828

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003, 2004, and 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

ND = Not detected above the method detection limit.

NA = Not analyzed.

**Bold** = Analyte detected above laboratory reporting limit.

*Italics* = Reporting limit above the corresponding PRG.

<sup>-- =</sup> No PRG assigned.

<sup>&</sup>lt; = Not detected above the reporting limit provided.

No data was collected during the October 1998 sampling event.

Table 9
Recovery Well Analytical Results
Wayne Reclamation & Recycling

		RECO	VERY WELL RV	V-2 (Abovegro	ound Storage Tank	Area)		PRG
CONSTITUENT Date Sampled	8/27/1996	11/6/1996	6/11/1997	11/18/1997	4/21/1998	11/1/2001	10/25/2002	(µg/L)
VOCs (µg/L)								
Acetone	NA	NA	NA	NA	ND	ND	ND	3,650
Benzene	ND	ND	ND	ND	ND	ND	ND	0.617
Bromomethane	ND	ND	ND	ND	ND	ND	ND	
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	ND	
n-Butylbenzene	ND	NA	NA	NA	ND	ND	ND	
Carbon Disulfide	NA	NA	NA	NA	ND	ND	ND	768
Chloroethane	ND	2.6	2.2	ND	ND	ND	ND	
Chloroform	ND	ND	ND	ND	ND	ND	ND	0.274
Dibromomethane	ND	NA	NA	NA	ND	ND	ND	
1,1-Dichloroethane	8.1	160	110	21	52	18.2	19	973
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	
1.1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	0.0167
cis-1,2-Dichloroethene	6.6	150	189	53	7.73	45	55	70
trans-1,2-Dichloroethene	ND	1.6	1.4	ND	ND	1.7	ND	100
1,2-Dichloroethene, Total	6.6	151.6	181.4	53	78	46.7	55	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	700
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	ND	487
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	1.43
Toluene	ND	ND	ND	ND	ND	ND	ND	1,000
1,1,1-Trichloroethane	ND	23.0	20.0	ND	6.1	4.4	ND	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	0.314
Trichloroethene	ND	ND	ND	ND	ND	1.2	ND	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	ND	
Vinyl Chloride	7.7	150	97	(* £ 19	747 W	53	10	0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	828

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

ND = Not detected above the method detection limit.

NA = Not analyzed.

No data was collected during the October 1998 sampling event.

October 2002 data was validated to Level IV; no flags were required for the data in this table collected on that date.

**Bold** = Analyte detected above laboratory reporting limit. Shaded = Analyte detected above the corresponding PRG. -- = No PRG assigned.

Table 9
Recovery Well Analytical Results
Wayne Reclamation & Recycling

	RECOVERY WELL RW-3 (Aboveground Storage Tank Area)  P											PRG
CONSTITUENT Date Sampl	ed: 8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	8/18/1999	10/19/1999	11/1/2001	12/22/2003	10/22/2004	10/11/2005	(µg/L)
VOCs (µg/L)						<del>_</del>				_		
Acetone	NA	NA	NA	NA	ND	ND	ND	ND	<20.0	<20.0	< 20	3,650
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.617
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	
2-Butanone (MEK)	NA	NA	NA	NA	NA	ND	NA	NA	<12.5	<20.0	< 20	
n-Butylbenzene	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	
Carbon Disulfide	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	<20.0	< 20	768
Chloroethane	ND	NA	ND	ND	ND	ND	ND	ND	<5.0	<2.0	< 2	
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	< 1.0	< 1	0.274
Dibromomethane	ND	NA	NA	NA	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethane	ND	3.1	2.7	4.9	ND	ND	ND	9.4	3.6	3.2	3.7	973
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethene	ND	ND	ND	1.9	ND	ND	ND	ND	<1.0	<1.0	< 1	0.0167
cis-1,2-Dichloroethene	<b>390</b>	<b>** .330</b> **	270	690	340 📆	150	200	349	183	170	+ 260	70
trans-1,2-Dichloroethene	10	5.9	6.9	15	11	ND	5.1	8.6	7.1	5.0	6.4	100
1,2-Dichloroethene, Total	400	335.9	276.9	705	351	150	205.1	357.6	190.1	175	266.4	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	<1.()	<1.0	< l	700
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	ND	ND	<12. <i>5</i>	<20.0	< 20	487
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.43
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1,000
1,1,1-Trichloroethane	ND	ND	ND	1.7	ND	ND	ND	4.4	4.9	5.3	10.0	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	< 1.0	< 1	0.314
Trichloroethene	150	130	120	240	330	96	140	99.1	106	92	88	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	ND	ND	<1.0	NA	< 5	
Vinyl Chloride	43	40	28	50	3.5	11.0	15.0	30.4	30.7	9.7	12	0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	828

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

No data was collected during the October 1998 sampling event.

October 2003, 2004, and 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

ND = Not detected above the method detection limit.

NA = Not analyzed.

**Bold** = Analyte detected above laboratory reporting limit.

*Italics* = Reporting limit above the corresponding PRG.

<sup>-- =</sup> No PRG assigned.

<sup>&</sup>lt; = Not detected above the reporting limit provided.

Table 9
Recovery Well Analytical Results
Wayne Reclamation & Recycling

			RECOV	ERY WELL R	W-4 (Monito	ring Wells MV	V-4S and MW	-7S Area)			PRG
CONSTITUENT Date Samp	oled: 8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	4/23/2002	12/22/2003	10/22/2004	10/11/2005	(µg/L)
VOCs (μg/L)						<u> </u>					
Acetone	NA	NA	NA	NA	ND	ND	ND	<20.0	<20.0	< 20	3,650
Benzene	ND	ND	ND	ND	ND	ND	ND	<1.0	< 1.0	< 1	0.617
Bromomethane	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 2	
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	NA	<12.5	<20.0	< 20	
n-Butylbenzene	ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	< 1	
Carbon Disulfide	NA	NA	NA	NA	ND	ND	ND	<1.0	<20.0	< 20	768
Chloroethane	ND	NA	ND	ND	ND	ND	ND	< 5.0	<2.0	< 2	
Chloroform	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.274
Dibromomethane	ND	NA	NA	NA	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethane	ND	2.9	1.5	2.6	ND	13.3	1.2	1.5	2.7	1.7	973
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	
1,1-Dichloroethene	ND	ND	ND	ND	ND	2.3	ND	<1.0	<1.0	< 1	0.0167
cis-1,2-Dichloroethene	## its #	4.59	290	<b></b>	£ - 180 "	1,580	147	(j. 165 🎉	ecs 330 -		70
trans-1,2-Dichloroethene	27	26	18	24	12	23.2	16.4	13.8	25	16	100
1,2-Dichloroethene, Total	457	476	308	414	192	1,603.2	163.4	178.8	355	216	(170)
1.2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< !	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< i	700
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	ND	<12.5	<20.0	< 20	487
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1.43
Toluene	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	1,000
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	<1.0	<1.0	< 1	0.314
Trichloroethene	ND	ND	ND	ND	ND	258	ND	<1.0	<1.0	< 1	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	ND	<1.0	NA	< 5	
Vinyl Chloride	ND	ND	ND	ND	ND	142	ND	<1.0	2.9	< 1	0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND_	ND	<1.0	<1.0	< 1	828

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

No data was collected during the October 1998 sampling event.

October 2003, 2004, and 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

ND = Not detected above the method detection limit.

NA = Not analyzed.

**Bold** = Analyte detected above laboratory reporting limit.

Italics = Reporting limit above the corresponding PRG.

<sup>-- =</sup> No PRG assigned.

<sup>&</sup>lt; = Not detected above the reporting limit provided.

Table 9
Recovery Well Analytical Results
Wayne Reclamation & Recycling

		-		RECOV	ERY WELL	RW-5 (Sou	theast of the l	Landfill)				PRG
CONSTITUENT Date Sampled:	8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	4/23/2002	10/25/2002	12/22/2003	10/22/2004	10/11/2005	(µg/L)
VOCs (µg/L)			-									
Acetone	NA	NA	NA	NA	ND	ND	ND	ND	<100	<20.0	< 100	3,650
Benzene	ND	ND	ND	ND	ND	4.0	3.8	5.6	< 5.0	3.6	< 5	0.617
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	NA	<2.0	< 10	1
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	NA	NA	<62	<20.0	< 100	
n-Butylbenzene	ND	NA	NA	NA	ND	ND	ND	ND	< 5.0	<1.0	< 5	
Carbon Disulfide	NA	NA	NA	NA	ND	ND	ND	ND	< 5.0	<20.0	< 100	768
Chloroethane	ND	NA	ND	ND	ND	ND	ND	ND	<25	<2.0	< 10	
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	< 5.0	< 1.0	< 5	0.274
Dibromomethane	ND	NA	NA	NA	ND	ND	ND	ND	< 5.0	<1.0	< 5	
1,1-Dichloroethane	ND	ND	1.1	4.0	ND	7.1	4.7	5.7	< 5.0	4.7	< 5	973
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	< 5.0	<1.0	< 5	
1,1-Dichloroethene	ND	ND	ND	ND	ND	2.9	2.2	5.2	< 5.0	2.8		0.0167
cis-1,2-Dichloroethene	3307	F 336	<b>7.7910</b>	F 1,900 &	194,600	5,310	3,520	5,500	<b>2,816</b>	3,600	2,200	70
trans-1,2-Dichloroethene	20	26	53	140	260	<b>211</b>	143	96	102	63	21	100
1,2-Dichloroethene, Total	350	356	963	2,040	4,260	5,521	3,663	5,596	2,912	3,663	2,221	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	< 5.0	<1.0	< 5	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	700
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	ND	ND	<62	<20	< 100	487
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND	< 5.0	<1.0	< 5	1.43
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	1,000
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	4.0	3.1	ND	< 5.0	1.2	< 5	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	< 5.0	<1.0	< 5	0.314
Trichloroethene	ND	1.8	ND	15	130	348	219	<b>5</b> 5 🐬	175	50 (J)	17	2.54
1.2.4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	ND	ND	< 5.0	NA	< 25	
Vinyl Chloride	100	200	520	1,600	1,100	393	436	600	335	520	360	0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND	ND	ND	<5.0	<1.0	< 5	828

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

October 2002 data validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003 and October 2005 data validated to Level II; no flags were required for the data in this table collected on those dates.

October 2004 data validated to Level II; (J) = estimated.

No data was collected during the October 1998 sampling event.

ND = Not detected above the method detection limit.

NA = Not analyzed.

**Bold** = Analyte detected above laboratory reporting limit.

*Italics* = Reporting limit above the corresponding PRG.

<sup>-- =</sup> No PRG assigned.

<sup>&</sup>lt; = Not detected above the reporting limit provided.

Table 9
Recovery Well Analytical Results
Wayne Reclamation & Recycling

	Ī		•	RECOVERY WELL RV	V-6 (Southeast Area	)		PRG
CONSTITUENT Date S	ampled:	8/27/1996	11/6/1996	6/12/1997	11/18/97	4/21/1998	11/2/2001	(µg/L)
VOCs (µg/L)				<u> </u>	<del></del>		-	
Acetone		NA	NA	NA	NA	ND	ND	3,650
Benzene	1	ND	ND	ND	ND	ND	ND	0.617
Bromomethane		ND	ND	ND	ND	ND	ND	
2-Butanone (MEK)	1	NA	NA	NA	NA	NA	NA	
n-Butylbenzene	1	ND	NA	NA	NA	ND	ND	
Carbon Disulfide		NA	NA	NA	NA	ND	ND	768
Chloroethane		ND	NA	7.5	ND	ND	ND	
Chloroform		ND	ND	ND	ND	ND	ND	0.274
Dibromomethane		ND	NA	NA	NA	ND	ND	
1,1-Dichloroethane		ND	ND	21	ND	ND	ND	973
1,2-Dichloroethane		ND	ND	ND	ND	ND	ND	
1,1-Dichloroethene	- 1	ND	ND	3.6	ND	ND	ND	0.0167
cis-1,2-Dichloroethene		ND	ND	14,500	1.0	5.7	43.1	70
trans-1,2-Dichloroethene		ND	ND	53	ND	ND	ND	100
1,2-Dichloroethene, Total		ND	ND	4,553	1.0	5.7	43.1	(170)
1,2-Dichloropropane		ND	ND	ND	ND	ND	ND	1.25
Ethylbenzene		ND	ND	ND	ND	ND	ND	700
4-Methyl-2-pentanone (MIB	K)	NA	NA	NA	NA	ND	ND	487
Tetrachloroethene	1	ND	ND	ND	ND	ND	ND	1.43
Toluene		ND	ND	ND	ND	ND	ND	1,000
1,1,1-Trichloroethane	1	ND	ND	3.1	ND	ND	ND	200
1,1,2-Trichloroethane		ND	ND	ND	ND	ND	ND	0.314
Trichlorocthene		ND	ND	240	ND	ND	ND	2.54
1,2,4-Trimethylbenzene		NA	NA	NA	NA	ND	ND	
Vinyl Chloride	Į.	ND	ND	780	1.1	ND	112	0.0283
Xylenes, Total		ND	ND	ND	ND	ND	ND	828

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

ND = Not detected above the method detection limit.

NA = Not analyzed.

No data was collected during the October 1998 sampling event.

**Bold** = Analyte detected above laboratory reporting limit.

Shaded = Analyte detected above the corresponding PRG.

Table 9
Recovery Well Analytical Results
Wayne Reclamation & Recycling

		RECO	OVERY WELL	RW-7 (Southeast Are	a)		PRG
CONSTITUENT Date Sampled:	8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	(μg/L)
VOCs (µg/L)			· ———	<u></u>			
Acetone	NA	NA	NA	NA	ND	ND	3,650
Benzene	ND	ND	ND	ND	ND	ND	0.617
Bromomethane	ND	ND	ND	ND	ND	ND	
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	
n-Butylbenzene	ND	NA	NA	NA	ND	ND	
Carbon Disulfide	NA	NA	NA	NA	ND	ND	768
Chloroethane	ND	NA	ND	ND	ND	ND	
Chloroform	ND	ND	ND	ND	ND	ND	0.274
Dibromomethane	ND	NA	NA	NA	ND	ND	
1,1-Dichloroethane	ND	ND	ND	ND	ND	1.7	973
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethene	ND	ND	ND	ND	ND	1.1	0.0167
cis-1,2-Dichloroethene	2.4	75.57 9167	71667	<b>524</b> (\$2)	ND	653	70
trans-1,2-Dichloroethene	ND	43	2.2	12	ND	7.1	100
1,2-Dichloroethene, Total	2.4	953	102	+532	ND	660	(170)
1,2-Dichloropropane	ND	7.4	ND	2.4	ND	ND	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	700
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	487
Tetrachloroethene	ND	1.0	ND	ND	ND	ND	1.43
Toluene	ND	ND	ND	ND	ND	ND	1,000
1,1.1-Trichloroethane	ND	ND	ND	ND	ND	ND	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	0.314
Trichloroethene	1.7	290	26	140	43	101	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	
Vinyl Chloride	ND	ND	ND	7.9	<b>3.3</b>	174	0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND	828

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

ND = Not detected above the method detection limit.

NA = Not analyzed.

No data was collected during the October 1998 sampling event.

**Bold** = Analyte detected above laboratory reporting limit.

Shaded = Analyte detected above the corresponding PRG.

Table 9
Recovery Well Analytical Results
Wayne Reclamation & Recycling

CONSTITUENT Date Sampled:	RECOVERY WELL RW-8 (Southeast Area)						PRG
	8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	(µg/L)
VOCs (µg/L)							
Acetone	NA	NA	NA	NA	ND	ND	3,650
Benzene	ND	ND	ND	ND	ND	ND	0.617
Bromomethane	ND	ND	ND	ND	ND	ND	
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	
n-Butylbenzene	ND	NA	NA	NA	ND	ND	
Carbon Disulfide	NA	NA	NA	NA	ND	ND	768
Chloroethane	ND	NA	3.6	2.1	ND	ND	
Chloroform	ND	ND	ND	ND	ND	ND	0.274
Dibromomethane	ND	NA	NA	NA	ND	ND	
1,1-Dichloroethane	ND	11	19	29	ND	110	973
1,2-Dichloroethane	ND	1,400	ND	ND	ND	ND	
1,1-Dichloroethene	ND	3.1	<b>5.6</b>	5.8	ND	30.6	0.0167
cis-1,2-Dichloroethene	3,000	1,434	2,800	4,700	3,500	18,500	70
trans-1,2-Dichloroethene	66	ND	42	44	ND	144	100
1,2-Dichloroethene, Total	3,066	1,434	2,842	4,744	5,500	18,644	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	700
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	487
Tetrachloroethene	ND	ND	ND	ND	ND	ND	1.43
Toluene	ND	ND	ND	ND	ND	ND	1,000
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	0.314
Trichloroethene	140	98	160	180	270	5,250	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	
Vinyl Chloride	650	130	316	160	ND	802	0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND	828

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

ND = Not detected above the method detection limit.

NA = Not analyzed.

No data was collected during the October 1998 sampling event.

**Bold** = Analyte detected above laboratory reporting limit.

Shaded = Analyte detected above the corresponding PRG.

Table 9
Recovery Well Analytical Results
Wayne Reclamation & Recycling

		REC	OVERY WELL I	RW-9 (Southeast A	Area)		PRG
CONSTITUENT Date Sampled:	8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	(μg/L)
VOCs (µg/L)		<del>-</del>					
Acetone	NA	NA	NA	NA	ND	ND	3,650
Benzene	ND	ND	ND	ND	ND	ND	0.617
Bromomethane	ND	ND	ND	ND	ND	ND	
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	
n-Butylbenzene	ND	NA	NA	NA	ND	ND	
Carbon Disulfide	NA	NA	NA	NA	ND	ND	768
Chloroethane	ND	NA	3.3	ND	ND	ND	
Chloroform	ND	ND	ND	ND	ND	ND	0.274
Dibromomethane	ND	NA	NA	NA	ND	ND	
1,1-Dichloroethane	1.3	3.3	1.2	1.9	ND	3.0	973
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethene	ND	3.1	\$ 57 m	1144 2	ND	45 6.3 C	0.0167
cis-1,2-Dichloroethene	340 💯	<b>- 2,100</b>	2,700	3,000	5,300	3,880	70
trans-1,2-Dichloroethene	3	19	32	17	61	32.6	100
1,2-Dichloroethene, Total	343	2,119	2,732	3,017	5,361	3,913	(170)
1,2-Dichloropropane	ND	ND	ND	ND	ND	1.8	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	700
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	487
Tetrachloroethene	ND	ND	3.1	ND	ND	ND	1.43
Toluene	ND	ND	ND	ND	ND	ND	1,000
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	200
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	0.314
Trichloroethene	23	230	480	300	<b>510</b>	565	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	
Vinyl Chloride	5.1	220	410	400	ND	306	0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND	828

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

ND = Not detected above the method detection limit.

NA = Not analyzed.

No data was collected during the October 1998 sampling event.

**Bold** = Analyte detected above laboratory reporting limit.

Shaded = Analyte detected above the corresponding PRG.

-- = No PRG assigned.

Table 9
Recovery Well Analytical Results
Wayne Reclamation & Recycling

		RE	COVERY WELL R	W-10 (Southeast A	Area)		PRG
CONSTITUENT Date Sampled	8/27/1996	11/6/1996	6/12/1997	11/18/1997	4/21/1998	11/2/2001	(µg/L)
VOCs (µg/L)						i	
Acetone	NA	NA	NA	NA	ND	ND	3,650
Benzene	ND	ND	ND	ND	ND	7	0.617
Bromomethane	2	ND	ND	ND	ND	ND	
2-Butanone (MEK)	NA	NA	NA	NA	NA	NA	
n-Butylbenzene	ND	NA	NA	NA	ND	ND	
Carbon Disulfide	NA	NA	NA	NA	ND	ND	768
Chloroethane	10	NA	NA	17	ND	17	
Chloroform	ND	ND	ND	ND	ND	ND	0.274
Dibromomethane	ND	NA	NA	NA	ND	ND	
1,1-Dichloroethane	68	8	55	71	74	82	973
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	
1,1-Dichloroethene	47 4 3 THE	ND	14417 7 cm		ND	7.7	0.0167
cis-1,2-Dichloroethene	1 100 - The state of the state	7,100	**************************************	48,000	11,000	1,000 · · ·	70
trans-1,2-Dichloroethene	89	28	58	77	84	89	100
1,2-Dichloroethene, Total	6,189	1,128	8,658	48,077	11,084	11,989	(170)
1.2-Dichloropropane	ND	ND	ND	1	ND	2	1.25
Ethylbenzene	ND	ND	ND	ND	ND	ND	700
4-Methyl-2-pentanone (MIBK)	NA	NA	NA	NA	ND	ND	487
Tetrachloroethene	1	ND	1	ND	ND	ND	1.43
Toluene	ND	ND	ND	ND	ND	ND	1,000
1.1.1-Trichloroethane	ND	ND	ND	ND	ND	ND	200
1.1.2-Trichloroethane	ND	ND	ND	ND	ND	ND	0.314
Trichloroethene	420	53	500	440	640	308	2.54
1,2,4-Trimethylbenzene	NA	NA	NA	NA	ND	ND	
Vinyl Chloride	1,400	290	1,900	1,200	1,400	548	0.0283
Xylenes, Total	ND	ND	ND	ND	ND	ND	828

Volatile organic compounds (VOCs) and Preliminary Remediation Goals (PRGs) reported in micrograms per liter (µg/L).

ND = Not detected above the method detection limit.

NA = Not analyzed.

No data was collected during the October 1998 sampling event.

**Bold** = Analyte detected above laboratory reporting limit.

Shaded = Analyte detected above the corresponding PRG.

-- = No PRG assigned.

Table 10
Summary of Recovery Well Construction Details
Wayne Reclamation & Recycling

Recovery Well Identification	TOIC Elevations 2001	Surface Elevations (msl)	Total Depth (bgs)	Well Diameter (inches)	Screen Length (feet)	Sump Length (feet)	Bottom Screen Elevation (msl)	Top Screen Elevation (msl)	Slot Size (inches)	General Location	Installation Date
RW-1	818.45	819.52	32.00	6	20	5	792.52	812.52	0.02	AST Area	October-94
RW-2	824.29	825.07	40.00	6	20	5	790.07	810.07	0.02	AST Area	October-94
RW-3	822.71	823.36	32.00	6	20	5	796.36	816.36	0.02	AST Area	October-94
RW-4	833.24	833.53	48.30	6	20	5	790.23	810.23	0.02	RW-4 Area	October-94
RW-5	823.94	824.20	40.00	6	30	0	784.20	814.20	0.02	SE Area	October-94
RW-6	820.71	821.62	43.50	6	35	0	778.12	813.12	0.02	SE Area	October-94
RW-7	820.21	821.51	36.00	6	30	0	785.51	815.51	0.02	SE Area	October-94
RW-8	821.86	823.03	41.80	6	35	0	781.23	816.23	0.02	SE Area	October-94
RW-9	821.69	821.88	37.00	6	30	0	784.88	814.88	0.02	SE Area	October-94
RW-10	822.55	824.03	40.30	6	35	0	783.73	818.73	0.02	SE Area	October-94

TOIC = Top of inner well casing.

msl = Above mean sea level.

bgs = Below ground surface.

RW = Recovery well.

AST = Aboveground Storage Tank.

SE = Southeast.

Depth to groundwater measured in feet below TOIC.

TOIC and surface elevations based on Benchmark Surveying, Inc. surveys of 7/2/2001 and 10/25/2001.

Construction details from As-Built Remedial Design drawings (Warzyn, March 1995).

Table 11
Summary of Groundwater Treatment System Volatile Organic Compound
Influent and Effluent Sampling
Wayne Reclamation & Recycling

Date Sampled	1/13/	2006	2/10/2	2006	3/15/:	2006
CONSTITUENT	IN	EFF	IN	EFF	IN	EFF
VOCs (µg/L)						
1,1-Dichloroethane	20	<1	23	<1	25.0	<1
1,2-Dichloroethane	<10	<1	<1	<1	<1	<1
1,1-Dichloroethene	<10	<1	2	<1	6	<1
cis-1,2-Dichloroethene	1,800	96	2,300	91	2,300	55
trans-1,2-Dichloroethene	18	<1	22	<1	23.0	<1
Trichloroethene	240	5	360	4.1	430	4.2
Vinyl Chloride	230	<1	190	<1_	230	<1
Total VOC Concentration	2,308.0	101.0	2,897.3	95.1	3,013.6	59.2

Date Sampled	4/26/	2006	5/22/	2006	6/15/	2006
CONSTITUENT	IN	EFF	IN	EFF	IN	EFF
VOCs (μg/L)						
1,1-Dichloroethane	6	<1	13	<1	7	<1
1,2-Dichloroethane	<1	<1	<1	<1	<1	<1
1,1-Dichloroethene	<1	<1	2.3	<1	1.4	<l< td=""></l<>
cis-1,2-Dichloroethene	800	36	1,000	72	750	44
trans-1,2-Dichloroethene	10	<1	13	<1	8.9	<l< td=""></l<>
Trichloroethene	100	1.8	160	3.0	81	2.0
Vinyl Chloride	120	<1	110	<1	74	<1
Total VOC Concentration	1,035.6	37.8	1,298.3	75.0	922.4	46.0

Volatile organic compounds (VOCs) reported in micrograms per liter (µg/L).

< = Not detected above the reporting limit provided.

**Bold** = Analyte detected above the laboratory reporting limit.

Results indicated for primary detected constituents.

Data validated to Level II; no flags issued for data shown in this table.

IN = Influent water sample.

EFF = Effluent water sample.

Table 12
Summary of Groundwater Treatment System Effluent Sampling - Metals, Inorganics, and Polychlorinated Biphenyls
Wayne Reclamation & Recycling

CONSTITUENT Date Sampled:	11/18/1997	12/18/1997	1/30/1998	10/13/1998	10/13/1999	10/6/2000	10/31/2001	10/24/2002	10/16/2003	10/21/2004	10/13/2005
Total Metals (mg/L)											
Arsenic	0.015	0.0044	0.005	< 0.005	< 0.005	< 0.028	<0.0050	<0.0050	0.0130	< 0.0100	< 0.01
Beryllium	< 0.0050	< 0.0050	<0.0050	<0.003	< 0.003	< 0.003	<0.0010	<0.0010	<0.0010	<0.00400	< 0.004
Cadmium	< 0.0050	<0.0050	<0.0050	< 0.005	<0.010	< 0.005	<0.0010	<0.0010	<0.0010	< 0.00500	< 0.005
Chromium	< 0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.0020	<0.0020	<0.0020	< 0.0100	< 0.01
Copper	0.032	<0.020	1.9	<0.010	< 0.005	< 0.005	<0.0050	<0.0050	0.0170	< 0.0200	< 0.02
Lead	<0.10	<0.10	<0.10	<0.005	< 0.005	< 0.005	<0.0010	<0.0010	<0.0010	<0.0100	< 0.01
Mercury	< 0.00020	<0.00020	<0.00020	<0.0005	< 0.0005	< 0.0005	<0.0002	<0.0002	< 0.0002	<0.00200	< 0.002
Molybdenum	< 0.20	< 0.20	< 0.20	<0.020	< 0.020	< 0.020	0.0061	0.0084	0.0064	<0.0500	< 0.05
Nickel	< 0.050	<0.020	<0.020	<0.020	< 0.020	< 0.005	0.0091	0.0078	0.0110	<0.0500	< 0.05
Potassium	12.0	12.0	9.5	11.0	9.0	9.0	8.6	10.7	10.8	10.4	9.14
Selenium	< 0.0020	< 0.0020	<0.0020	< 0.005	< 0.005	< 0.036	<0.0050	<0.0050	<0.0050	<0.0100	< 0.01
Silver	<0.010	<0.010	<0.010	<0.020	< 0.001	< 0.005	<0.0005	<0.0005	<0.0005	<0.0500	< 0.05
Zinc	0.054	<0.020	< 0.020	<0.020	<0.020	< 0.020	< 0.050	< 0.050	0.226	<0.0500	< 0.05
Inorganics/Wet Chemistry (mg/I	.)										
Ammonia Nitrogen	0.72	0.15	0.28	1.00	0.80	1.10	1.20	1.8	2.6	1.45	1.17
Biological Oxygen Demand	<2.0	<2.0	<2.0	<5	6	8	<5	9.4	<5	<5	12
Chemical Oxygen Demand	23	18	21	<10	<10	16	72	24	17	<10.0	26.9
Nitrate/Nitrite Nitrogen	0.32	0.33	0.44	0.036	0.04	0.033	0.23	0.033	0.20	<0.500	< 0.5
Oil & Grease	<5.0	<5.0	<5.0	<5.0	6	6	<5	<5	<5	<5.00	< 5
рН	8.3	8.27	7.65	NA	7.2	7.2	NA	8.06	7,87	8.14	8.14
Surfactants (MBAs)	Negative	Negative	Negative	Positive	Positive	Negative	0.13	0.16	<0.10	0.701	< 0.2
Total Cyanide	< 0.005	< 0.005	<0.0050	<0.005	< 0.005	< 0.020	<0.005	< 0.005	<0.005 (J)	<0.00500	< 0.005
Total Kjeldahl Nitrogen	47	1.21	0.98	1.6	1.09	1.5	1.6	2.1	2.7	2.08	< 2
Total Phenols	<0.01	<0.01	0.17	<0.010	<0.010	< 0.005	0.0093	0.0084	<0.010	<0.100	< 0.05
Total Phosphorus	0.93	0.75	0.96	<0.05	0.48	< 0.15	<0.15	< 0.15	<0.05	<0.0500	< 0.05
Total Solids	1,100	820	850	830	790	820	850	800	960	940	734
Total Suspended Solids	11	14	19	27	<5	5	9	<5	6	34.5	< 5
PCBs (µg/L)											
Aroclor 1016	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	< 0.20	< 0.51	< 0.5
Aroclor 1221	< 0.2	< 0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5
Aroclor 1232	<0.4	<0.4	<0.4	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5
Aroclor 1242	<0.2	< 0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5
Aroclor 1248	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5
Aroclor 1254	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	<0.51	< 0.5
Aroclor 1260	<0.2	<0.2	<0.2	<1.0	<0.7	<1.0	<0.21	<0.21	<0.20	< 0.51	< 0.5

Total metals and inorganic/wet chemistry parameters reported in milligrams per liter (mg/L).

Polychlorinated biphenyls (PCBs) are reported in micrograms per liter (µg/L).

**Bold** = Analyte detected above laboratory reporting limit.

< = Not detected above the reporting limit provided.

NA = Not analyzed.

October 2002 data was validated to Level IV; no flags were required for the data in this table collected on that date.

October 2003 data was validated to Level II; (J) = estimated.

October 2004 and October 2005 data was validated to Level II: no flags were required for the data in this table collected on those dates.

Table 13
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	4/23	/1999	5/17/	1999	6/24	/1999
CONSTITUENT (ppb[v/v])	IN	EFF	IN	EFF	IN	EFF
1.1-Dichloroethane	26	25	29	13	45	9
1,1-Dichloroethene	<14	<13	<18	<12	<17	6
cis-1,2-Dichloroethene	1,600	1,500	2,200	1,000	2,300	390
trans-1,2-Dichloroethene	50	58	52	36	140	35
Tetrachloroethene	<14	17	110	52	46	6
Toluene	20	<13	<18	<12	<17	3
1,1,1-Trichloroethane	36	36	83	25	43	8
Trichloroethene	220	300	570	240	860	120
Vinyl Chloride	360	280	220	120	240	35
Cumulative Risk (1)	7.52E-07	5.93E-07	4.98E-07	2.67E-07	5.45E-07	7.90E-08

Date Sampled	7/13/1999	8/6/1999	9/1/1999	10/14/1999	11/23/1999	12/13/1999
CONSTITUENT (ppb[v/v])			EFFLUEN	T SAMPLE		
1,1-Dichloroethane	45	45	60	61	32	32
1,1-Dichloroethene	<7.8	<9.2	4	<9.2	<14	<12
cis-1,2-Dichloroethene	2,200	<9.2	1,600	3,300	1,400	1,500
trans-1,2-Dichloroethene	100	140	120	260	76	95
Tetrachloroethene	51	27	25	63	16	38
Toluene	<7.8	<9.2	<2.3	<9.2	<14	<12
1,1.1-Trichloroethane	180	44	200	99	97	66
Trichloroethene	440	810	390	1,700	390	520
Vinyl Chloride	340	270	220	180	200	200
Cumulative Risk (1)	7.29E-07	6.01E-07	4.76E-07	4.68E-07	4.33E-07	4.44E-07

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

IN = Influent; EFF = effluent sample; < = not detected above the reporting limit provided.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

<sup>(1)</sup> Cumulative Risk calculation is indicated on Table 14.

Table 13
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/3/2000	2/7/2000	3/15/2000	4/25/2000	5/24/2000	6/6/2000			
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE								
1.1-Dichloroethane	29	17	25	31	30	27			
1.1-Dichloroethene	<18	<8.3	<9.0	<3.1	<12	2			
cis-1,2-Dichloroethene	1,100	740	1,200	2,300	1,000	1,800			
trans-1.2-Dichloroethene	68	55	46	83	71	85			
Tetrachloroethene	57	<8.3	88	<21	110	30			
Toluene	<18	<8.3	<9.0	<3.1	<12	<2.0			
1.1,1-Trichloroethane	110	29	89	47	150	110			
Trichloroethene	440	220	400	300	440	380			
Vinyl Chloride	94	91	61	260	130	190			
Cumulative Risk (1)	2.25E-07	2.00E-07	1.60E-07	5.52E-07	3.07E-07	4.14E-07			

Date Sampled	7/25/2000	8/4/2000	9/5/2000	10/6/2000	11/7/2000	12/21/2000			
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE								
1,1-Dichloroethane	21	30	34	49	36	30			
1.1-Dichloroethene	<9.7	<12	<12	<18	<10	<9.3			
cis-1.2-Dichloroethene	1,400	2,200	2,100	2,200	1,900	1,900			
trans-1.2-Dichloroethene	39	100	140	160	97	100			
Tetrachloroethene	31	56	22	52	110	38			
Toluene	<9.7	<12	<12	<18	<10	<9.3			
1.1.1-Trichloroethane	80	59	80	93	73	50			
Trichloroethene	290	840	540	920	840	760			
Vinyl Chloride	190	230	210	130	170	190			
Cumulative Risk (1)	4.10E-07	5.25E-07	4.63E-07	3.23E-07	4.10E-07	4.36E-07			

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

<sup>(1)</sup> Cumulative Risk calculation is indicated on Table 14.

<sup>&</sup>lt; = Not detected above the reporting limit provided.

Table 13
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/30/2001	2/26/2001	3/21/2001	4/23/2001	5/21/2001	6/13/2001			
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE								
1,1-Dichloroethane	30	<140	18	<140	<150	<150			
1.1-Dichloroethene	<9.2	<140	2.1	<140	<150	<150			
cis-1,2-Dichloroethene	2,000	1,700	1,300	1,000	630	1,400			
trans-1.2-Dichloroethene	49	NA	NA	NA	NA	NA			
Tetrachloroethene	38	<140	34	<140	<150	<150			
Toluene	<9.2	<140	4.0	<140	<150	<150			
1,1,1-Trichloroethane	53	<140	26	<140	<150	<150			
Trichloroethene	630	260	340	160	<150	430			
Vinyl Chloride	270	180	190	160	<150	210			
Cumulative Risk (1)	5.93E-07	4.05E-07	4.13E-07	3.58E-07	3.39E-07	4.77E-07			

Date Sampled	7/23/2001	8/23/2001	9/17/2001	10/31/2001	11/18/2001	12/28/2001			
CONSTITUENT (ppb[v/v])		EFFLUENT SAMPLE							
1,1-Dichloroethane	<140	<140	<140	<140	<100	<130			
1,1-Dichloroethene	<140	<140	<140	<140	<100	<130			
cis-1,2-Dichloroethene	1,100	600	680	1,500	2,200	1,700			
trans-1,2-Dichloroethene	NA	NA	NA	<140	<100	NA			
Tetrachloroethene	<140	<140	<140	<140	<100	<130			
Toluene	<140	<140	<140	<140	<100	<130			
1,1,1-Trichloroethane	<140	<140	<140	<140	<100	<130			
Trichloroethene	140	280	280	410	460	300			
Vinyl Chloride	<140	<140	<140	260	210	210			
Cumulative Risk (1)	3.16E-07	3.24E-07	3.24E-07	5.77E-07	4.71E-07	4.67E-07			

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

<sup>(1)</sup> Cumulative Risk calculation is indicated on Table 14.

<sup>&</sup>lt; = Not detected above the reporting limit provided; NA = not analyzed.

Table 13
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/18/2002	2/7/2002	3/21/2002	4/23/2002	5/23/2002	6/18/2002				
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE									
1,1-Dichloroethane	<130	<130	<140	3.5	<140	<140				
1.1-Dichloroethene	<130	<130 2,800 NA <130 <130	<140 <b>900</b> NA <140	<0.69	<140	<140				
cis-1,2-Dichloroethene	1,600			37	800	1,200				
trans-1,2-Dichloroethene	NA			NA	NA	NA				
Tetrachloroethene	<130			<140 <0.69	<140 <140 <140	<140				
Toluene	<130		<140			<140				
1,1,1-Trichloroethane	<130	<130	<140			<140				
Trichloroethene	280	530	180	29	160	290				
Vinyl Chloride	280	500	160	1.0	150	220				
Cumulative Risk <sup>(1)</sup>	6.09E-07	1.07E-06	3.59E-07	4.79E-09	3.38E-07	4.88E-07				

Date Sampled	7/19/2002	8/14/2002	9/20/2002	10/24/2002	11/21/2002	12/13/2002			
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE								
1,1-Dichloroethane	<140	<140	<100	<130	<140	<140			
1,1-Dichloroethene	<140	<140	<100	<130	<140	<140			
cis-1,2-Dichloroethene	230	920	1,500	1,500	1,200	1,100			
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA			
Tetrachloroethene	<140	<140	<100	<130	<140	<140			
Toluene	<140	<140	<100	<130	<140	<140			
1,1,1-Trichloroethane	<140	<140	<100	<130	<140	<140			
Trichloroethene	<140	200	520	1,000	720	410			
Vinyl Chloride	<140	220	<100	<130	<140	<140			
Cumulative Risk (1)	3.16E-07	4.84E-07	2.48E-07	3.47E-07	3.47E-07	3.31E-07			

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided; NA = not analyzed.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

July through December 2002 data validated to Level IV; no flags required for data in this table collected on those dates.

<sup>(1)</sup> Cumulative Risk calculation is indicated on Table 14.

Table 13
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/23/2003	2/10/2003	3/19/2003	4/15/2003	5/19/2003	6/6/2003			
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE								
1,1-Dichloroethane	<140	<140	<130	<140	<130	<140			
1.1-Dichloroethene	<140	<140	<130	<140	<130	<140			
cis-1,2-Dichloroethene	920	520	760	1,400	750	1,000			
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA			
Tetrachloroethene	<140	<140	<130	<140	<130	<140			
Toluene	<140	<140	<130	<140	<130	<140			
1,1,1-Trichloroethane	<140	<140	<130	<140	<130	<140			
Trichloroethene	420	320	320	380	280	390			
Vinyl Chloride	<140	<140	<130	<140	<130	<140			
Cumulative Risk (1)	3.31E-07	3.26E-07	3.04E-07	3.29E-07	3.02E-07	3.29E-07			

Date Sampled	7/14/2003	8/21/2003	9/15/2003	10/16/2003	11/7/2003	12/22/2003			
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE								
1.1-Dichloroethane	<140	<140	2.3	< 130	< 130	< 130			
1.1-Dichloroethene	<140	<140	<0.66	< 130	< 130	< 130			
cis-1,2-Dichloroethene	740	800	270	750	380	1,100			
trans-1.2-Dichloroethene	NA	NA	NA	NA	NA	NA			
Tetrachloroethene	<140	<140	7.4	< 130	< 130	< 130			
Toluene	<140	<140	<0.66	< 130	< 130	< 130			
1.1.1-Trichloroethane	<140	<140	5.4	< 130	< 130	< 130			
Trichloroethene	290	330	240	230	230	220			
Vinyl Chloride	<140	<140	11	< 130	< 130	190			
Cumulative Risk (1)	3.24E-07	3.26E-07	3.63E-08	2.99E-07	2.99E-07	4.22E-07			

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided; NA = not analyzed.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

2003 data validated to Level II; no flags required for data in this table collected in 2003.

<sup>(1)</sup> Cumulative Risk calculation is indicated on Table 14.

Table 13
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/29/2004	2/20/2004	3/16/2004	4/19/2004	5/18/2004	6/23/2004				
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE									
1,1-Dichloroethane	<130	<120	<140	18	<150	23				
1.1-Dichloroethene	<130	<120	<140	3.1	<150	5.0				
cis-1,2-Dichloroethene	350	1,200	540	2,300	510	1,800				
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA				
Tetrachloroethene	<130	<120	<140	7.1	<150	12				
Toluene	<130	<120	<140	2.1	<150 <150	5.8				
1,1,1-Trichloroethane	<130	<120	<140	4.8		4.3				
Trichloroethene	<130	300	<140	480	<150	260				
Vinyl Chloride	150	220	<140	350	<150	300				
Cumulative Risk (1)	3.35E-07	4.86E-07	3.16E-07	7.44E-07	3.39E-07	6.31E-07				

Date Sampled	7/30/2004	8/31/2004	9/22/2004	10/19/2004	11/22/2004	12/17/2004				
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE									
1.1-Dichloroethane	<140	<130	<140	<150	<140	<140				
1,1-Dichloroethene	<140	<130	<140	<150	<140	<140				
cis-1,2-Dichloroethene	1,300	1,000	620	820 (UB)	1,000	1,300				
trans-1,2-Dichloroethene	NA	NA	NA	NA	NA	NA				
Tetrachloroethene	<140	<130	<140	<150 <150 <150	<140 <140 <140	<140				
Toluene	<140	<130	<140			<140				
1,1,1-Trichloroethane	<140	<130	<140			<140				
Trichloroethene	250	180	<140	180	210	780				
Vinyl Chloride	260	140	<140	180 (UB)	170	<140				
Cumulative Risk (1)	5.68E-07	3.17E-07	3.16E-07	4.02E-07	3.82E-07	3.50E-07				

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

2004 data validated to Level II; (UB) = estimated value due to blank contamination.

<sup>(1)</sup> Cumulative Risk calculation is indicated on Table 14.

<sup>&</sup>lt; = Not detected above the reporting limit provided; NA = not analyzed.

Table 13
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/26/2005	2/18/2005	3/16/2005	4/19/2005	5/13/2005	6/03/2005			
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE								
1.1-Dichloroethane	<140	<140	<140	53.2	15.9	22			
1.1-Dichloroethene	<140	<140	<140	<13.2	3	3			
cis-1,2-Dichloroethene	700	750	620	4,330	<0.71	1,970			
trans-1.2-Dichloroethene	NA	NA	<140	<14.1	NA	<113			
Tetrachloroethene	<140	<140	<140	46.8	15	21.6			
Toluene	<140	<140	<140	<13.2	<0.71	1.5			
1,1,1-Trichloroethane	<140	<140	<140	15.6	<0.64	18.2			
Trichloroethene	<140	<140	<140	718	35	522			
Vinyl Chloride	<140	<140	180	<13.8	<0.74	274			
Cumulative Risk (1)	3.16E-07	3.16E-07	3.98E-07	7.34E-08	5.69E-09	5.93E-07			

Date Sampled	7/15/2005	8/26/2005	9/29/2005	10/17/2005	11/03/2005	12/01/2005			
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE								
1,1-Dichloroethane	< 140	< 140	56	< 140	< 0.69	22.5			
1.1-Dichloroethene	< 140	< 140	< 13.8	< 140	< 0.69	< 14.8			
cis-1,2-Dichloroethene	920	2,400	7,160 J	1,300	< 0.69	NA			
trans-1.2-Dichloroethene	< 140	< 140	185	< 140	< 0.69	19.4			
Tetrachloroethene	< 140	< 140	< 13.8	< 140	< 0.69	< 14.8			
Toluene	< 140	< 140	< 13.8	< 140	< 0.69	< 14.8			
1,1,1-Trichloroethane	< 140	< 140	16	< 140	< 0.69	< 14.8			
Trichloroethene	250	710	< 13.8	300	< 0.69	224			
Vinyl Chloride	< 140	530	< 13.8	< 140	< 0.69	344			
Cumulative Risk (1)	3.22E-07	1.15E-06	3.12E-08	3.25E-07	1.56E-09	7.20E-07			

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided; NA = not analyzed.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

2005 data validated to Level II; no flags required for data in this table.

<sup>(1)</sup> Cumulative Risk calculation is indicated on Table 14.

Table 13
Summary of Treatment System Air Sampling
Wayne Reclamation & Recycling

Date Sampled	1/09/2006	2/10/2006	3/15/2006	4/26/2006	5/23/2006	6/15/2006				
CONSTITUENT (ppb[v/v])	EFFLUENT SAMPLE									
1,1-Dichloroethane	26	21	22	<13.8	23.3	<13.8				
1,1-Dichloroethene	<14.3	5	<13.8	<13.8	<11.8	<13.8				
cis-1,2-Dichloroethene	2,330	1,930	2,650	818	1,800	1160				
trans-1,2-Dichloroethene	23	20	18	38	123	48.6				
Tetrachloroethene	<14.3	<3.4	<13.8	35	<11.8	22.4				
Toluene	<14.3	<3.4	<13.8	<18.0	<11.8	<13.8				
1,1,1-Trichloroethane	<14.3	<3.4	<13.8	<18.0	<11.8	28.4				
Trichloroethene	315	283	270	279	421	313				
Vinyl Chloride	423	310	215	147	317	168				
Cumulative Risk (1)	8.87E-07	6.51E-07	4.57E-07	3.22E-07	6.74E-07	3.65E-07				

Results are reported in parts per billion on a volume per volume basis (ppb[v/v]) for primary detected constituents, analyzed via United States Environmental Protection Agency Method TO-14.

< = Not detected above the reporting limit provided; NA = not analyzed.

Bold = Analyte detected above the laboratory reporting limit.

Air treatment system was discontinued on June 24, 1999. Air is now discharged directly to the atmosphere.

2006 data validated to Level II; no flags required for data in this table.

<sup>(1)</sup> Cumulative Risk calculation is indicated on Table 14.

Table 14 Summary of Air Dispersion Calculations Wayne Reclamation & Recycling

Description			<del></del>			CONSTITUENTS					Cumulative
/ Sample Date	Input / Output	Tetrachloroethene Carcinogen	Trichloroethene Carcinogen	1,1-Dichloroethene Non-Carcinogen	cis-1,2-Dichloroethene Non-Carcinogen	trans-1,2-Dichloroethene Non-Carcinogen	Vinyl Chloride Carcinogen	1,1,1-Trichloroethane Non-Carcinogen	1,1-Dichloroethane Carcinogen	Toluene Non-Carcinogen	Cancer Risk
IN	(ppb[v/v])	46	860	17	2300	140	240	43	45	17	
6/24/1999	(g/s)	0.0003	0.0048	0.0001	0.0129	0.0008	0.0013	0.0002	0.0003	0.0001	
	Max.Conc.	0.001	0.023	0.000	0.060	0.004	0.006	0.001	0.001	0.000	
	ECR	7.14E-09	4.52E-08				4.92E-07		1.93E-11	I	5.45E-07
EFF	(ppb[v/v])	6	120	6	390	35	35	8	9	3	
6/24/1999	(g/s)	0.0000	0.0007	0.0000	0.0022	0.0002	0.0002	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.003	0.000	0.010	0.001	0.001	0.000	0.000	0.000	
	ECR	9.31E-10	6.31E-09				7.18E-08		3.86E-12		7.90E-08
EFF	(ppb[v/v])	51	440	8	2200	100	340	180	45	8	
7/13/1999	(g/s)	0.0003	0.0025	0.0000	0.0123	0.0006	0.0019	0.0010	0.0003	0.0000	
	Max.Conc.	0.001	0.012	0.000	0.058	0.003	0.009	0.005	0.001	0.000	
	ECR	7.91E-09	2.31E-08				6.97E-07		1.93E-11	I	7.29E-07
EFF	(ppb[v/v])	27	810	45	9	140	270	44	45	9	
8/6/1999	(g/s)	0.0002	0.0045	0.0003	0.0001	0.0008	0.0015	0.0002	0.0003	0.0001	
	Max.Conc.	0.001	0.021	0.001	0.000	0.004	0.007	0.001	0.001	0.000	
	ECR	4.19E-09	4.26E-08				5.54E-07		1.93E-11		6.01E-07
EFF	(ppb[v/v])	25	390	4	1600	120	220	200	60	2	
9/1/1999	(g/s)	0.0001	0.0022	0.0000	0.0090	0.0007	0.0012	0.0011	0.0003	0.0000	
	Max.Conc.	0.001	0.010	0.000	0.042	0.003	0.006	0.005	0.002	0.000	
	ECR	3.88E-09	2.05E-08				4.51E-07	-	2.57E-11		4.76E-07
EFF	(ppb[v/v])	63	1700	9	3300	260	180	99	61	9	
10/14/1999	(g/s)	0.0004	0.0095	0.0001	0.0185	0.0015	0.0010	0.0006	0.0003	0.0001	
	Max.Conc.	0.002	0.045	0.000	0.087	0.007	0.005	0.003	0.002	0.000	
	ECR	9.78E-09	8.94E-08				3.69E-07		2.62E-11		4.68E-07
EFF	(ppb[v/v])	16	390	14	1400	76	200	97	32	14	
11/22/1999	(g/s)	0.0001	0.0022	0.0001	0.0078	0.0004	0.0011	0.0005	0.0002	0.0001	
	Max.Conc.	0.000	0.010	0.000	0.037	0.002	0.005	0.003	0.001	0.000	
	ECR	2.48E-09	2.05E-08				4.10E-07		1.37E-11	T	4.33E-07
EFF	(ppb[v/v])	38	520	14	1500	95	200	66	32	14	
12/13/1999	(g/s)	0.0002	0.0029	0.0001	0.0084	0.0005	0.0011	0.0004	0.0002	0.0001	··-
	Max.Conc.	0.001	0.014	0.000	0.039	0.002	0.005	0.002	0.001	0.000	
	ECR	5.90E-09	2.74E-08		1		4.10E-07		1.37E-11	ļ - · · ·	4.44E-07
EFF	(ppb[v/v])	57	440	18	1100	68	94	110	29	18	
1/3/2000	(g/s)	0.0003	0.0025	0.0001	0.0062	0.0004	0.0005	0.0006	0.0002	0.0001	·
	Max.Conc.	0.001	0.012	0.000	0.029	0.002	0.002	0.003	0.001	0.000	
	ECR	8.84E-09	2.31E-08			<u> </u>	1.93E-07	· · · · · · · · · · · · · · · · · · ·	1.24E-11	<u> </u>	2.25E-07
EFF	(ppb[v/v])	8	220	8	740	55	91	29	17	8	
2/7/2000	(g/s)	0.0000	0.0012	0.0000	0.0041	0.0003	0.0005	0.0002	0.0001	0.0000	
	Max.Conc.	0.000	0.006	0.000	0.019	0.001	0.002	0.001	0.000	0.000	
	ECR	1.29E-09	1.16E-08	l	† <del></del>	1	1.87E-07		7.29E-12	<u> </u>	2.00E-07
					ــــــــــــــــــــــــــــــــــــــ		1			<del></del>	

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.  $g/s = ppb[v/v] \times 1.000 / (22.500 \times 2.205 \times 3.600)$ .

ECR = Excess Cancer Risk = Maximum concentration (in µg/m<sup>3</sup>) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed (µg/m²) from ISC-LT2 model run output.

Unit Risk Factors are:

Vinyl Chloride - 7.80E-05 1.1-Dichloroethane - 1.63E-08 Trichloroethene - 2.00E-06

Tetrachloroethene -- 5.90E-06

Table 14
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description			-			CONSTITUENTS		··			Cumulative
/ Sample Date	Input / Output	Tetrachloroethene Carcinogen	Trichloroethene Carcinogen	1,1-Dichloroethene Non-Carcinogen	cis-1,2-Dichloroethene Non-Carcinogen	trans-1,2-Dichloroethene Non-Carcinogen	Vinyl Chloride Carcinogen	I,1,1-Trichloroethane Non-Carcinogen	1,1-Dichloroethane Carcinogen	Toluene Non-Carcinogen	Cancer Risk
EFF	(ppb[v/v])	88	400	9	1200	46	61	89	25	9	
3/15/2000	(g/s)	0.0005	0.0022	0.0001	0.0067	0.0003	0.0003	0.0005	0.0001	0.0001	
	Max.Conc.	0.002	0.011	0.000	0.032	0.001	0.002	0.002	0.001	0.000	
	ECR	1.37E-08	2.10E-08				1.25E-07		1.07E-11		1.60E-07
EFF	(ppb[v/v])	21	300	3	2300	83	260	47	31	3	
4/25/2000	(g/s)	0.0001	0.0017	0.0000	0.0129	0.0005	0.0015	0.0003	0.0002	0.0000	
	Max.Conc.	0.001	0.008	0.000	0.060	0.002	0.007	0.001	0.001	0.000	
	ECR	3.26E-09	1.58E-08				5.33E-07		1.33E-11		5.52E-07
EFF	(ppb[v/v])	110	440	12	1000	71	130	150	30	12	
5/24/2000	(g/s)	0.0006	0.0025	0.0001	0.0056	0.0004	0.0007	0.0008	0.0002	0.0001	
	Max.Conc.	0.003	0.012	0.000	0.026	0.002	0.003	0.004	0.001	0.000	
	ECR	1.71E-08	2.31E-08		<u> </u>		2.67E-07		1.29E-11		3.07E-07
EFF	(ppb[v/v])	30	380	2	1800	85	190	110	27	2	ĺ
6/6/2000	(g/s)	0.0002	0.0021	0.0000	0.0101	0.0005	0.0011	0.0006	0.0002	0.0000	<u> </u>
	Max.Conc.	0.001	0.010	0.000	0.047	0.002	0.005	0.003	0.001	0.000	
	ECR	4.66E-09	2.00E-08		1		3.90E-07		1.16E-11	1	4.14E-07
EFF	(ppb[v/v])	31	290	10	1400	39	190	80	21	10	
7/25/2000	(g/s)	0.0002	0.0016	0.0001	0.0078	0.0002	0.0011	0.0004	0.0001	0.0001	
.,	Max.Conc.	0.001	0.008	0.000	0.037	0.001	0.005	0.002	0.001	0.000	
	ECR	4.81E-09	1.53E-08				3.90E-07		9.00E-12		4.10E-07
EFF	(ppb[v/v])	56	840	12	2200	100	230	59	30	12	
8/4/2000	(g/s)	0.0003	0.0047	0.0001	0.0123	0.0006	0.0013	0.0003	0.0002	0.0001	
	Max.Conc.	0.001	0.022	0.000	0.058	0.003	0.006	0.002	0.001	0.000	†
	ECR	8.69E-09	4.42E-08				4.72E-07		1.29E-11		5.25E-07
EFF	(ppb[v/v])	22	540	12	2100	140	210	80	34	12	
9/5/2000	(g/s)	0.0001	0.0030	0.0001	0.0118	0.0008	0.0012	0.0004	0.0002	0.0001	
	Max.Conc.	0.001	0.014	0.000	0.055	0.004	0.006	0.002	0.001	0.000	
	ECR	3.41E-09	2.84E-08		1		4.31E-07	1	1.46E-11		4.63E-07
EFF	(ppb[v/v])	52	920	18	2200	160	130	93	49	18	
10/6/2000	(g/s)	0.0003	0.0052	0.0001	0.0123	0.0009	0.0007	0.0005	0.0003	0.0001	
10/0/2000	Max.Conc.	0.001	0.024	0.000	0.058	0.004	0.003	0.002	0.001	0.000	<del>                                     </del>
	ECR	8.07E-09	4.84E-08		0.02.0		2.67E-07	*****	2.10E-11	1	3.23E-07
EFF	(ppb[v/v])	110	840	10	1900	97	170	73	36	10	
11/7/2000	(g/s)	0.0006	0.0047	0.0001	0.0106	0.0005	0.0010	0.0004	0.0002	0.0001	t
11/12/000	Max.Conc.	0.003	0.022	0.0001	0.050	0.003	0.004	0.002	0.002	0.000	
	ECR	1.71E-08	4.42E-08				3.49E-07	0.002	1.54E-11	†	4.10E-07
EFF	(ppb[v/v])	38	760	9	1900	100	190	50	30	9	
12/21/2000	(ppo[v/v]) (g/s)	0.0002	0.0043	0.0001	0.0106	0.0006	0.0011	0.0003	0.0002	0.0001	
12/21/2000	Max.Conc.	0.0002	0.0043	0.000	0.0106	0.003	0.001	0.0003	0.002	0.000	<del>                                     </del>
	ECR	5.90E-09	4.00E-08	0.000	0.0.00	0.003	3.90E-07	0.001	1.29E-11	0.000	4.36E-07
	TCCK	J.90E-09	4.00E-08	1	ı	L	3.90E-0/	1	1.490-11	1	4.300-07

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.  $g/s = ppb[v/v] \times 1.000 / (22.500 \times 2.205 \times 3.600)$ .

ECR = Excess Cancer Risk = Maximum concentration (in µg/m²) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed (µg/m<sup>3</sup>) from ISC-LT2 model run output.

Unit Risk Factors are: Vinyl Chloride -- 7.80E-05

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06 Tetrachloroethene -- 5.90E-06

Table 14
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description						CONSTITUENTS					Cumulative
/ Sample Date	Input / Output	Tetrachloroethene Carcinogen	Trichloroethene Carcinogen	1,1-Dichloroethene Non-Carcinogen	cis-1,2-Dichloroethene Non-Carcinogen	trans-1,2-Dichloroethene Non-Carcinogen	Vinyl Chloride Carcinogen	1,1,1-Trichloroethane Non-Carcinogen	I,1-Dichloroethane Carcinogen	Toluene Non-Carcinogen	Cancer Risk
EFF	(ppb[v/v])	38	630	9	2000	49	270	53	30	9	
1/30/2001	(g/s)	0.0002	0.0035	0.0001	0.0112	0.0003	0.0015	0.0003	0.0002	0.0001	
	Max.Conc.	0.001	0.017	0.000	0.053	0.001	0.007	0.001	0.001	0.000	
	ECR	5.90E-09	3.31E-08				5.54E-07		1.29E-11		5.93E-07
EFF	(ppb[v/v])	140	260	140	1700	1	180	140	140	140	
2/26/2001	(g/s)	0.0008	0.0015	0.0008	0.0095	0.0000	0.0010	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.007	0.004	0.045	0.000	0.005	0.004	0.004	0.004	
	ECR	2.17E-08	1.37E-08	<u> </u>			3.69E-07		6.00E-11		4.05E-07
EFF	(ppb[v/v])	34	340	2	1300	1	190	26	18	4	
3/21/2001	(g/s)	0.0002	0.0019	0.0000	0.0073	0.0000	0.0011	0.0001	0.0001	0.0000	
	Max.Conc.	0.001	0.009	0.000	0.034	0.000	0.005	0.001	0.000	0.000	
	ECR	5.28E-09	1.79E-08	j			3.90E-07		7.721:-12	<b>†</b>	4.13E-07
EFF	(ppb[v/v])	140	160	140	1000	1	160	140	140	140	
4/23/2001	(g/s)	0.0008	0.0009	0.0008	0.0056	0.0000	0.0009	0.0008	0.0008	0.0008	
1	Max.Conc.	0.004	0.004	0.004	0.026	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	8.42E-09				3.28E-07		6.00E-11		3.58E-07
EFF	(ppb[v/v])	150	150	150	630	1	150	150	150	150	
5/21/2001	(g/s)	0.0008	0.0008	0.0008	0.0035	0.0000	0.0008	0.0008	0.0008	0.0008	<u> </u>
	Max.Conc.	0.004	0.004	0.004	0.017	0.000	0.004	0.004	0.004	0.004	†
	ECR	2.33E-08	7.89E-09				3.08E-07	·	6.43E-11		3.39E-07
EFF	(ppb[v/v])	150	430	150	1400	1	210	150	150	150	
6/13/2001	(g/s)	0.0008	0.0024	0.0008	0.0078	0.0000	0.0012	0.0008	0.0008	0.0008	İ
	Max.Conc.	0.004	0.011	0.004	0.037	0.000	0.006	0.004	0.004	0.004	<del></del>
	ECR	2.33E-08	2.26E-08		· · · · · · · · · · · · · · · · · · ·		4.31E-07	†	6.43E-11		4,77E-07
EFF	(ppb[v/v])	140	140	140	1100	1	140	140	140	140	
7/23/2001	(g/s)	0.0008	0.0008	0.0008	0.0062	0.0000	0.0008	0.0008	0.0008	0.0008	<del> </del>
	Max.Conc.	0.004	0.004	0.004	0.029	0.000	0.004	0.004	0.004	0.004	<u> </u>
	ECR	2.17E-08	7.36E-09				2.87E-07		6.00E-11		3.16E-07
EFF	(ppb[v/v])	140	280	140	600	1	140	140	140	140	
8/23/2001	(g/s)	0.0008	0.0016	0.0008	0.0034	0.0000	0.0008	0.0008	0.0008	0.0008	<del></del>
0.20.2001	Max.Conc.	0.004	0.007	0.004	0.016	0.000	0.004	0.004	0.004	0.004	<del></del>
	ECR	2.17E-08	1.47E-08			0.000	2.87E-07		6.00E-11		3.24E-07
EFF	(ppb[v/v])	140	280	140	680	<del>                                     </del>	140	140	140	140	
9/17/2001	(ppo(v/v)) (g/s)	0.0008	0.0016	0.0008	0.0038	0,0000	0.0008	0.0008	0,0008	0.0008	·
7/1//2001	Max.Conc.	0.004	0.007	0.004	0.0038	0.000	0.004	0.004	0.004	0.004	<del> </del>
-	ECR	2.17E-08	1.47E-08	0.004	0.010	1	2.87E-07	0.007	6.00E-11	0.007	3.24E-07
EFF		140	410	140	1500	140	260	140	140	140	3.272 07
10/31/2001	(ppb[v/v])	0.0008	0.0023	0.0008	0.0084	0.0008	0.0015	0.0008	0.0008	0.0008	<del> </del>
10/31/2001	(g/s) Max.Conc.	0.008	0.0023	0.004	0.039	0.008	0.0013	0.008	0.008	0.0008	<del> </del>
	ECR	2.17E-08	2.16E-08	0.004	0.039	0.004	5.33E-07	0.004	6.00E-11	0.004	5 775 07
I	ECK	2.17E-08	1 2.10E-08	I	1	i	] 3.33E-U/	1	0.002-11	1	5.77E-07

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.  $g/s = ppb[v/v] \times 1,000 / (22.500 \times 2.205 \times 3.600)$ .

ECR = Excess Cancer Risk = Maximum concentration (in µg/m³) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed ( $\mu g/m^4$ ) from ISC-LT2 model run output.

Unit Risk Factors are: Vinyl Chloride -- 7.80E-05

1.1-Dichloroethane -- 1.63E-08 Trichloroethene -- 2.00E-06

Tetrachloroethene -- 5.90E-06

Table 14
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description						CONSTITUENTS					Cumulative
/ Sample Date	Input / Output	Tetrachloroethene Carcinogen	Trichloroethene Carcinogen	1,1-Dichloroethene Non-Carcinogen	cis-1,2-Dichloroethene Non-Carcinogen	trans-1,2-Dichloroethene Non-Carcinogen	Vinyl Chloride Carcinogen	1,1,1-Trichloroethane Non-Carcinogen	1,1-Dichloroethane Carcinogen	Toluene Non-Carcinogen	Cancer Risk
EFF	(ppb[v/v])	100	460	100	2200	100	210	100	100	100	
11/18/2001	(g/s)	0.0006	0.0026	0.0006	0.0123	0,0006	0.0012	0.0006	0.0006	0.0006	
	Max.Conc.	0.003	0.012	0.003	0.058	0.003	0.006	0.003	0.003	0.003	
	ECR	1.55E-08	2.42E-08		T		4.31E-07		4.29E-11		4.71E-07
EFF	(ppb[v/v])	130	300	130	1700	1	210	130	130	130	
12/28/2001	(g/s)	0.0007	0.0017	0.0007	0.0095	0.0000	0.0012	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.008	0.003	0.045	0.000	0.006	0.003	0.003	0.003	·
	ECR	2.02E-08	1.58E-08			I	4.31E-07		5.57E-11		4.67E-07
EFF	(ppb[v/v])	130	280	130	1600	1	280	130	130	130	
1/18/2002	(g/s)	0.0007	0.0016	0.0007	0.0090	0.0000	0.0016	0.0007	0.0007	0.0007	<b>1</b>
-	Max.Conc.	0.003	0.007	0.003	0.042	0.000	0.007	0.003	0.003	0.003	1
	ECR	2.02E-08	1.47E-08				5.74E-07		5.57E-11		6.09F07
EFF	(ppb[v/v])	130	530	130	2800	1	500	130	130	130	
2/7/2002	(g/s)	0.0007	0.0030	0.0007	0.0157	0.0000	0.0028	0.0007	0.0007	0.0007	<u> </u>
	Max.Conc.	0.003	0.014	0.003	0.074	0.000	0.013	0.003	0.003	0.003	<u> </u>
	ECR	2.02E-08	2.79E-08				1.03E-06		5.57E-11		1.07E-06
EFF	(ppb[v/v])	140	180	140	900	1	160	140	140	140	
3/21/2002	(g/s)	0.0008	0.0010	0.0008	0.0050	0.0000	0.0009	0.0008	0.0008	0.0008	1
	Max.Conc.	0.004	0.005	0.004	0.024	0.000	0.004	0.004	0.004	0.004	1
	ECR	2.17E-08	9.47E-09				3.28E-07		6.00E-11	1	3.59E-07
EFF	(ppb v/v )	8	29	1	37	1	1	42	4	1	
4/23/2002	(g/s)	0.0000	0.0002	0.0000	0.0002	0.0000	0.0000	0.0002	0.0000	0.0000	<del>                                     </del>
	Max.Conc.	0.000	0.001	0.000	0.001	0.000	0.000	0.001	0.000	0.000	
	ECR	1.21E-09	1.53E-09				2.05E-09		1.50E-12	T	4.79E-09
EFF	(ppb[v/v])	140	160	140	800	1	150	140	140	140	
5/23/2002	(g/s)	0.0008	0.0009	0.0008	0.0045	0.0000	0.0008	0.0008	0.0008	0.0008	†
	Max.Conc.	0.004	0.004	0.004	0.021	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	8.42E-09		1		3.08E-07		6.00E-11	T	3.38E-07
EFF	(ppb[v/v])	140	290	140	1200	1	220	140	140	140	
6/18/2002	(g/s)	0.0008	0.0016	0.0008	0.0067	0.0000	0.0012	0.0008	0.0008	0.0008	1
	Max.Conc.	0.004	0.008	0.004	0.032	0.000	0.006	0.004	0.004	0.004	†
	ECR	2.17E-08	1.53E-08		İ		4.51E-07		6.00E-11		4.88E-07
EFF	(ppb[v/v])	140	140	140	230	1	140	140	140	140	1
7/19/2002	(g/s)	0.0008	0.0008	0.0008	0.0013	0.0000	0.0008	0.0008	0.0008	0.0008	<del>                                     </del>
·	Max.Conc.	0.004	0.004	0.004	0.006	0.000	0.004	0.004	0.004	0.004	<u> </u>
	ECR	2.17E-08	7.36E-09				2.87E-07		6.00E-11		3.16E-07
EFF	(ppb[v/v])	140	200	140	920	1	220	140	140	140	<del> </del>
8/14/2002	(g/s)	0.0008	0.0011	0.0008	0.0052	0.0000	0.0012	0.0008	0.0008	0.0008	<del> </del>
	Max.Conc.	0.004	0.005	0.004	0.024	0.000	0.006	0.004	0.004	0.004	<u> </u>
	ECR	2.17E-08	1.05E-08				4.51E-07	† <del></del>	6.00E-11	† - <del>****</del>	4.84E-07

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

 $g/s = ppb[v/v] \times 1,000 / (22,500 \times 2.205 \times 3,600).$ 

ECR = Excess Cancer Risk = Maximum concentration (in μg/m³) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed (µg/m²) from ISC-LT2 model run output.

Unit Risk Factors are: Vinyl Chloride 7.80E-05

1,1-Dichloroethane · 1.63E-08 Trichloroethene · 2.00E-06

Tetrachloroethene -- 5.90E-06

Table 14
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description		1				CONSTITUENTS					Cumulative
/ Sample Date	Input / Output	Tetrachloroethene Carcinogen	Trichloroethene Carcinogen	1,1-Dichloroethene Non-Carcinogen	cis-1,2-Dichloroethene Non-Carcinogen	trans-1,2-Dichloroethene Non-Carcinogen	Vinyl Chloride Carcinogen	1,1,1-Trichloroethane Non-Carcinogen	1,1-Dichloroethane Carcinogen	Toluene Non-Carcinogen	Cancer Risk
EFF	(ppb[v/v])	100	520	100	1500	1	100	100	100	100	
9/20/2002	(g/s)	0.0006	0.0029	0.0006	0.0084	0.0000	0.0006	0.0006	0.0006	0.0006	
	Max.Conc.	0.003	0.014	0.003	0.039	0.000	0.003	0.003	0.003	0.003	
	ECR	1.55E-08	2.74E-08				2.05E-07		4.29E-11		2.48F07
EFF	(ppb[v/v])	140	720	140	1300	1	140	140	140	140	
10/24/2002	(g/s)	0.0008	0.0040	0.0008	0.0073	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.019	0.004	0.034	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	3.79E-08				2.87E-07		6.00E-11		3.47E-07
EFF	(ppb[v/v])	140	720	140	1200	1	140	140	140	140	
11/21/2002	(g/s)	0.0008	0.0040	0.0008	0.0067	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.019	0.004	0.032	0.000	0.004	0.004	0.004	0.004	<u> </u>
	ECR	2.17E-08	3.79E-08				2.87E-07		6.00E-11		3.47E-07
EFF	(ppb[v/v])	140	410	140	1100	1	140	140	140	140	
12/13/2002	(g/s)	0.0008	0.0023	0.0008	0.0062	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.011	0.004	0.029	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	2.16E-08	1			2.87E-07	· · · · · · · · · · · · · · · · · · ·	6.00E-11	1	3.31E-07
EFF	(ppb[v/v])	140	420	140	920	1	140	140	140	140	
1/23/2003	(g/s)	0.0008	0.0024	0.0008	0.0052	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.011	0.004	0.024	0.000	0.004	0.004	0.004	0.004	<u> </u>
1	ECR	2.17E-08	2.21E-08				2.87E-07		6.00E-11		3.31E-07
EFF	(ppb[v/v])	140	320	140	520	1	140	140	140	140	
2/10/2003	(g/s)	0.0008	0.0018	0.0008	0.0029	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.008	0.004	0.014	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.68F08		1		2.87E-07		6.00E-11		3.26E-07
EFF	(ppb[v/v])	130	320	130	760	1	130	130	130	130	
3/19/2003	(g/s)	0.0007	0.0018	0.0007	0.0043	0.0000	0.0007	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.008	0.003	0.020	0.000	0.003	0.003	0.003	0.003	·
	ECR	2.02E-08	1.68E-08	· <del></del>	<b>†</b>		2.67E-07	1	5.57E-11		3.04E-07
EFF	(ppb[v/v])	140	380	140	1400	1	140	140	140	140	
4/15/2003	(g/s)	0.0008	0.0021	0.0008	0.0078	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.010	0.004	0.037	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	2.00E-08				2.87E-07		6.00E-11		3.29E-07
EFF	(ppb[v/v])	130	280	130	750	1	130	130	130	130	
5/19/2003	(g/s)	0.0007	0.0016	0.0007	0.0042	0.0000	0.0007	0.0007	0.0007	0.0007	<del> </del>
1	Max.Conc.	0.003	0.007	0.003	0.020	0.000	0.003	0.003	0.003	0.003	1
	ECR	2.02E-08	1.47E-08	0.000	5.020	0.000	2.67E-07		5.57E-11		3.02E-07
EFF	(ppb[v/v])	140	390	140	1000	1	140	140	140	140	, , , , , , , , , , , , , , , , , , ,
6/6/2003	(g/s)	0.0008	0.0022	0.0008	0.0056	0.0000	0.0008	0.0008	0.0008	0.0008	<del> -</del>
0/0/2003	Max.Conc.	0.004	0.0022	0.004	0.0036	0.000	0.004	0.004	0.004	0.008	<del></del>
	ECR	2.17E-08	2.05E-08	0.004	0.020	0.000	2.87E-07	0.004	6.00E-11	0.004	3.29E-07
	LECK	2.1713-00	2.001:-08		i	1	2.0/E-0/			1	3.27E-07

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

 $g/s = ppb[v/v] \times 1,000 / (22,500 \times 2.205 \times 3,600).$ 

ECR = Excess Cancer Risk = Maximum concentration (in µg/m<sup>1</sup>) x Unit Risk Factor.

1N = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed (µg/m³) from ISC-LT2 model run output.

Unit Risk Factors are: Vinyl Chloride -- 7.80E-05

1,1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06 Tetrachloroethene -- 5.90E-06

Table 14 Summary of Air Dispersion Calculations Wayne Reclamation & Recycling

Description						CONSTITUENTS					Cumulative
/ Sample Date	Input / Output	Tetrachloroethene Carcinogen	Trichloroethene Carcinogen	1,1-Dichloroethene Non-Carcinogen	cis-1,2-Dichloroethene Non-Carcinogen	trans-1,2-Dichloroethene Non-Carcinogen	Vinyl Chloride Carcinogen	1,1,1-Trichloroethane Non-Carcinogen	1,1-Dichloroethane Carcinogen	Toluene Non-Carcinogen	Cancer Risk
EFF	(ppb[v/v])	140	290	140	740	1	140	140	140	140	
7/14/2003	(g/s)	0.0008	0.0016	0.0008	0.0041	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.008	0.004	0.019	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.53E-08				2.87E-07		6.00E-11		3.24E-07
EFF	(ppb[v/v])	140	330	140	800	1	140	140	140	140	
8/21/2003	(g/s)	0.0008	0.0018	0.0008	0.0045	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.009	0.004	0.021	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.74E-08				2.87E-07		6.00E-11		3.26E-07
EFF	(ppb[v/v])	7.4	240	0.66	270	1	11	5.4	2.3	0.66	
9/15/2003	(g/s)	0.0000	0.0013	0.0000	0.0015	0.0000	0.0001	0.0000	0.0000	0.0000	
	Max.Conc.	0.000	0.006	0.000	0.007	0.000	0.000	0.000	0.000	0.000	
	ECR	1.15E-09	1.26E-08				2.26E-08		9.86E-13	<u> </u>	3.63E-08
EFF	(ppb[v/v])	130	230	130	750	1	130	130	130	130	
10/16/2003	(g/s)	0.0007	0.0013	0.0007	0.0042	0.0000	0.0007	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.006	0.003	0.020	0.000	0.003	0.003	0.003	0.003	
	ECR	2.02E-08	1.21E-08				2.67E-07		5.57E-11		2.99E-07
EFF	(ppb[v/v])	130	230	130	380	1	130	130	130	130	
11/7/2003	(g/s)	0.0007	0.0013	0.0007	0.0021	0.0000	0.0007	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.006	0.003	0.010	0.000	0.003	0.003	0.003	0.003	
	ECR	2.02E-08	1.21E-08				2.67E-07		5.57E-11	-	2.99E-07
EFF	(ppb[v/v])	130	220	130	1100	1	190	130	130	130	
12/22/2003	(g/s)	0.0007	0.0012	0.0007	0.0062	0.0000	0.0011	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.006	0.003	0.029	0.000	0.005	0.003	0.003	0.003	† -
	ECR	2.02E-08	1.16E-08				3.90E-07		5.57E-11		4.22E-07
EFF	(ppb[v/v])	130	130	130	350	1	150	130	130	130	
1/29/2004	(g/s)	0.0007	0.0007	0.0007	0.0020	0.0000	0.0008	0.0007	0.0007	0.0007	<del> </del>
	Max.Conc.	0.003	0.003	0.003	0.009	0.000	0,004	0.003	0.003	0.003	<u> </u>
	ECR	2.02E-08	6.84E-09				3.08E-07		5.57E-11	· · - · · · · · · · · · · · · · · · · ·	3.35E-07
EFF	(ppb[v/v])	120	300	120	1200	1	220	120	120	120	
2/20/2004	(g/s)	0.0007	0.0017	0.0007	0.0067	0.0000	0.0012	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.008	0.003	0.032	0.000	0.006	0.003	0.003	0.003	
	ECR	1.86E-08	1.58E-08				4.51E-07		5.14E-11		4.86E-07
EFF	(ppb[v/v])	140	140	140	540	1	140	140	140	140	T .
3/16/2004	(g/s)	0.0008	0.0008	0.0008	0.0030	0.0000	0.0008	0.0008	0.0008	0.0008	<u> </u>
	Max.Conc.	0.004	0.004	0.004	0.014	0.000	0.004	0.004	0.004	0.004	l
	ECR	2.17E-08	7.36E-09	<u> </u>			2.87E-07		6.00E-11	<del></del>	3.16E-07
EFF	(ppb[v/v])	7.1	480	3.1	2300	1	350	4.8	18	2.1	
4/19/2004	(g/s)	0.0000	0.0027	0.0000	0.0129	0.0000	0.0020	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.013	0.000	0.060	0.000	0.009	0.000	0.000	0.000	
	ECR	1.10E-09	2.52E-08	0.000	0.000	· · · · · · · · · · · · · · · · · · ·	7.18E-07	0.007	7.72E-12	- 0.000	7,44E-07
	LCR	1.101.707	2,021,-00		L	L	1 7.100-07		1.726-12	1	1 7.7715-07

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.  $g/s = ppb[v/v] \times 1,000 / (22,500 \times 2.205 \times 3,600).$ 

ECR = Excess Cancer Risk = Maximum concentration (in µg/m<sup>1</sup>) x Unit Risk Factor.

IN = Sample collected from air treatment system influent. EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed (µg/m1) from ISC-LT2 model run output.

Varyl Chloride -- 7.80E-05 Unit Risk Factors are:

1.1-Dichloroethane -- 1.63E-08

Trichloroethene -- 2.00E-06 Tetrachloroethene -- 5.90E-06

Table 14
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description		1		<del></del> -		CONSTITUENTS					Cumulative
/ Sample Date	Input / Output	Tetrachloroethene Carcinogen	Trichloroethene Carcinogen	1,1-Dichloroethene Non-Carcinogen	cis-1,2-Dichloroethene Non-Carcinogen	trans-1,2-Dichloroethene Non-Carcinogen	Vinyl Chloride Carcinogen	1,1,1-Trichloroethane Non-Carcinogen	1,1-Dichloroethane Carcinogen	Toluene Non-Carcinogen	Cancer Risk
EFF	(ppb[v/v])	150	150	150	510	1	150	150	150	150	
5/18/2004	(g/s)	0.0008	0.0008	0.0008	0.0029	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.013	0.000	0.004	0.004	0.004	0.004	l
	ECR	2.33E-08	7.89E-09				3.08E-07		6.43E-11		3.39E-07
EFF	(ppb[v/v])	12	260	5.0	1800	1	300	4.3	23	5.8	
6/23/2004	(g/s)	0.0001	0.0015	0.0000	0.0101	0.0000	0.0017	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.007	0.000	0.047	0.000	0.008	0.000	0.001	0.000	L
	ECR	1.86E-09	1.37E-08				6.15E-07		9.86E-12		6.31E-07
EFF	(ppb[v/v])	140	250	140	1300	1	260	140	140	140	
7/30/2004	(g/s)	0.0008	0.0014	0.0008	0.0073	0.0000	0.0015	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.007	0.004	0.034	0.000	0.007	0.004	0.004	0.004	<del></del>
	ECR	2.17E-08	1.32E-08				5.33E-07		6.00E-11		5.68E-07
EFF	(ppb[v/v])	130	180	130	1000	1	140	130	130	130	
8/31/2004	(g/s)	0.0007	0.0010	0.0007	0.0056	0.0000	0.0008	0.0007	0.0007	0.0007	
	Max.Conc.	0.003	0.005	0.003	0.026	0.000	0.004	0.003	0.003	0.003	
	ECR	2.02E-08	9.47E-09				2.87E-07		5.57E-11		3.17E-07
EFF	(ppb[v/v])	140	140	140	620	1	140	140	140	140	
9/22/2004	(g/s)	0.0008	0.0008	0.0008	0.0035	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.016	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09				2.87E-07		6.00E-11	l	3.16E-07
EFF	(ppb[v/v])	150	180	150	820	1	180	150	150	150	
10/19/2004	(g/s)	0.0008	0.0010	0.0008	0.0046	0.0000	0.0010	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.005	0.004	0.022	0.000	0.005	0.004	0.004	0.004	
	ECR	2.33E-08	9.47E-09				3.69E-07		6.43E-11	1	4.02F-07
EFF	(ppb[v/v])	140	210	140	1000	1	170	140	140	140	
11/22/2004	(g/s)	0.0008	0.0012	0.0008	0.0056	0.0000	0.0010	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.006	0.004	0.026	0.000	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.10E-08		<u> </u>		3.49E-07	·	6.00E-11		3.82E-07
EFF	(ppb[v/v])	140	780	140	1300	1	140	140	140	140	l
12/17/2004	(g/s)	0.0008	0.0044	0.0008	0.0073	0.0000	0.0008	0.0008	0.0008	0.0008	<u> </u>
	Max.Conc.	0.004	0.021	0.004	0.034	0.000	0.004	0.004	0.004	0.004	1
	ECR	2.17E-08	4.10E-08				2.87E-07		6.00E-11		3.50E-07
EFF	(ppb[v/v])	140	140	140	700	1	140	140	140	140	
1/26/2005	(g/s)	0.0008	0.0008	0.0008	0.0039	0.0000	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.018	0.000	0.004	0.004	0.004	0.004	<u> </u>
	ECR	2.17E-08	7.36E-09	İ			2.87E-07	1	6.00E-11		3.16E-07
EFF	(ppb[v/v])	140	140	140	750	1	140	140	140	140	
2/18/2005	(g/s)	0.0008	0.0008	0.0008	0.0042	0.0000	0.0008	0.0008	0.0008	0.0008	ļ
	Max.Conc.	0.004	0.004	0.004	0.020	0.000	0.004	0.004	0.004	0.004	† — — · — —
	ECR	2.17E-08	7.36E-09		†		2.87E-07	† - ,	6.00E-11		3.16E-07
					<u> </u>						l

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb]v/v] from Table 13.  $g/s = ppb[v/v] \times 1.000 / (22.500 \times 2.205 \times 3.600)$ .

ECR = Excess Cancer Risk = Maximum concentration (in µg/m³) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed (µg/m³) from ISC-LT2 model run output.

Unit Risk Factors are: Vinyl Chloride -- 7.80E-05

1,1-Dichloroethane - 1,63E-08

Trichloroethene - 2.00E-06 Tetrachloroethene - 5.90E-06

Table 14
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description						CONSTITUENTS					Cumulative
/ Sample Date	Input / Output	Tetrachloroethene Carcinogen	Trichloroethene Carcinogen	1,1-Dichloroethene Non-Carcinogen	cis-1,2-Dichloroethene Non-Carcinogen	trans-1,2-Dichloroethene Non-Carcinogen	Vinyl Chloride Carcinogen	1,1,1-Trichloroethane Non-Carcinogen	1,1-Dichloroethane Carcinogen	Toluene Non-Carcinogen	Cancer Risk
EFF	(ppb[v/v])	140	140	140	620	170	180	140	140	140	
3/16/2005	(g/s)	0.0008	0.0008	0.0008	0.0035	0.0010	0.0010	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.004	0.004	0.016	0.004	0.005	0.004	0.004	0.004	
	ECR	2.17E-08	7.36E-09				3.69E-07		6.00E-11		3.98E-07
EFF	(ppb{v/v})	46.8	718	13.2	4330	14.1	13.8	15.6	53.2	13.2	
4/19/2005	(g/s)	0.0003	0.0040	0.0001	0.0242	0.0001	0.0001	0.0001	0.0003	0.0001	
	Max.Conc.	0.001	0.019	0.000	0.114	0.000	0.000	0.000	0.001	0.000	
	ECR	7.26E-09	3.78E-08				2.83E-08		2.28E-11		7.34E-08
EFF	(ppb[v/v])	15.1	34.7	3.4	0.71	1	0.74	0.64	15.9	0.71	
5/13/2005	(g/s)	0.0001	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
	ECR	2.34E-09	1.83E-09		l		1.52E-09		6.82E-12		5.69E-09
EFF	(ppb[v/v])	21.6	522	3	1970	113	274	18.2	22	1.5	
6/03/2005	(g/s)	0.0001	0.0029	0.0000	0.0110	0.0006	0.0015	0.0001	0.0001	0.0000	
	Max.Conc.	0.001	0.014	0.000	0.052	0.003	0.007	0.000	0.001	0.000	
	ECR	3.35E-09	2.75E-08		<u> </u>		5.62E-07		9.43E-12		5.93E-07
EFF	(ppb[v/v])	140	250	140	920	140	140	140	140	140	
7/15/2005	(g/s)	0.0008	0.0014	0.0008	0.0052	0.0008	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.007	0.004	0.024	0.004	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.32E-08				2.87E-07		6.00E-11	T	3.22E-07
EFF	(ppb v/v )	140	710	140	2400	140	530	140	140	140	
8/26/2005	(g/s)	0.0008	0.0040	0.0008	0.0134	0.0008	0.0030	0.0008	0.0008	0.0008	···-
	Max.Conc.	0.004	0.019	0.004	0.063	0.004	0.014	0.004	0.004	0.004	
	ECR	2.17E-08	3.73E-08				1.09E-06		6.00E-11		1.15E-06
EFF	(ppb[v/v])	13.8	13.8	13.8	7160	185	13.8	16.40	56.2	13.8	
9/29/2005	(g/s)	0.0001	0.0001	0.0001	0.0401	0.0010	0.0001	0.0001	0.0003	0.0001	
	Max.Conc.	0.000	0.000	0.000	0.188	0.005	0.000	0.000	0.001	0.000	
	ECR	2.14E-09	7.26E-10				2.83E-08		2.41E-11		3.12E-08
EFF	(ppb[v/v])_	140	300	140	1300	140	140	140	140	140	
10/17/2005	(g/s)	0.0008	0.0017	0.0008	0.0073	0.0008	0.0008	0.0008	0.0008	0.0008	
	Max.Conc.	0.004	0.008	0.004	0.034	0.004	0.004	0.004	0.004	0.004	
	ECR	2.17E-08	1.58E-08				2.87E-07		6.00E-11	<u> </u>	3.25E-07
EFF	(ppb[v/v])	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	L
11/03/2005	(g/s)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	ļ
L	Max.Conc.	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	l
	ECR	1.07E-10	3.63E-11				1.42E-09	ļ	2.96E-13	<del> </del>	1.56E-09
EFF	(ppb[v/v])	14.8	224	14.8	ļ. <u>- ! </u>	19.4	344	14.8	22.5	14.8	ļ
12/01/2005	(g/s)	0.0001	0.0013	0.0001	0.0000	0.0001	0.0019	0.0001	0.0001	0.0001	<b></b>
	Max.Conc.	0.000	0.006	0.000	0.000	0.001	0.009	0.000	0.001	0.000	
L	ECR	2.30E-09	1.18E-08	L	<u> </u>	l	7.06E-07	1	9.65E-12	<u> </u>	7.20E-07

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb(v/v)) from Table 13.

 $g/s \approx ppb(v/v) \times 1,000 / (22.500 \times 2.205 \times 3,600).$ 

ECR = Excess Cancer Risk = Maximum concentration (in µg/m²) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent.

Bold = Cumulative Cancer Risk above action level.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed (µg/m<sup>4</sup>) from ISC-LT2 model run output.

Unit Risk Factors are: Vinyl Chloride -- 7.80E-05

1,1-Dichloroethane - 1.63E-08

Trichlomethene -- 2.00E-06 Tetrachlomethene -- 5.90E-06

Table 14
Summary of Air Dispersion Calculations
Wayne Reclamation & Recycling

Description				<del></del>		CONSTITUENTS					Cumulative
/ Sample	Input /	Tetrachloroethene	Trichloroethene	1,1-Dichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1,1-Trichloroethane	1,1-Dichloroethane	Toluene	Сапсег
Date	Output	Carcinogen	Carcinogen	Non-Carcinogen	Non-Carcinogen	Non-Carcinogen	Carcinogen	Non-Carcinogen	Carcinogen	Non-Carcinogen	Risk
EFF	(pph[v/v])	14	315	14	2330	23	423	14	26	14	
1/09/2006	(g/s)	0.0001	0.0018	0.0001	0.0130	0.0001	0.0024	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.008	0.000	0.061	0.001	0.011	0.000	0.001	0.000	
	ECR	2.22E-09	1.66E-08				8.68E-07		1.11E-11		8.87E-07
EFF	(ppb[v/v])	3.4	283	4.7	1930	19.9	310	3.4	21.4	3.4	
2/10/2006	(g/s)	0.0000	0.0016	0.0000	0.0108	0.0001	0.0017	0.0000	0.0001	0.0000	
	Max.Conc.	0.000	0.007	0.000	0.051	0.001	0.008	0.000	0.001	0.000	
	ECR	5.28E-10	1.49E-08				6.36E-07		9.17E-12		6.51E-07
EFF	(ppb[v/v])	13.8	270	13.8	2650	18	215.00	13.8	21.5	13.8	
3/15/2006	(g/s)	0.0001	0.0015	0.0001	0.0148	0.0001	0.0012	0.0001	0.0001	0.0001	I
	Max.Conc.	0.000	0.007	0.000	0.070	0.000	0.006	0.000	0.001	0.000	
	ECR	2.14E-09	1.42E-08				4.41E-07		9.22E-12		4.57E-07
EFF	(ppb[v/v])	34.7	279	13.8	818	38	147	18.0	13.8	18.0	
4/26/2006	(g/s)	0.0002	0.0016	0.0001	0.0046	0.0002	0.0008	0.0001	0.0001	0.0001	
	Max.Conc.	0.001	0.007	0.000	0.022	0.001	0.004	0.000	0.000	0.000	
	ECR	5.38E-09	1.47E-08				3.02E-07		5.92E-12		3.22E-07
EFF	(ppb[v/v])	11.8	421	11.8	1800	123	317	11.8	23.30	11.8	
5/23/2006	(g/s)	0.0001	0.0024	0.0001	0.0101	0.0007	0.0018	0.0001	0.0001	0.0001	
	Max.Conc.	0.000	0.011	0.000	0.047	0.003	0.008	0.000	0.001	0.000	
	ECR	1.83E-09	2.21E-08				6.50E-07		9.99E-12		6.74E-07
EFF	(ppb[v/v])	22.4	313	13.8	1160	48.6	168	28.4	13.8	13.8	
6/25/2006	(g/s)	0.0001	0.0018	0.0001	0.0065	0.0003	0.0009	0.0002	0.0001	0.0001	1
	Max.Conc.	0.001	0.008	0.000	0.031	0.001	0.004	0.001	0.000	0.000	I
	ECR	3.48E-09	1.65E-08				3.45E-07		5.92E-12		3.65E-07

Detected constituent concentrations in parts per billion on a volume per volume basis (ppb[v/v]) from Table 13.

 $g/s = ppb[v/v] \times 1,000 / (22,500 \times 2,205 \times 3,600).$ 

ECR = Excess Cancer Risk = Maximum concentration (in µg/m<sup>3</sup>) x Unit Risk Factor.

IN = Sample collected from air treatment system influent.

EFF = Sample collected from air treatment system effluent,

Bold = Cumulative Cancer Risk above action level.

Max. Conc. = Maximum predicted concentration in micrograms per meter cubed (µg/m1) from ISC-LT2 model run output.

Unit Risk Factors are: Vinyl Chloride -- 7.80E-05

1.1-Dichloroethane -- 1.63E-08 Trichloroethene -- 2.00E-06 Tetrachloroethene -- 5.90E-06

Table 15
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

											Air	r Stripper <sup>(4)</sup>		Sum of
		SE Area	SVE Sy	stem (1)	AST Area - S	SVE Bra	nch Line G (2)	AST Area -	SVE Bra	nch Line H (3)	Groundwater	IN minus	Removal	VOCs
		Air Flow Rate <sup>(5)</sup>	Conc.	Removal Rate	Air Flow Rate	Conc.	Removal Rate	Air Flow Rate	Conc.	Removal Rate	Flow Rate	EFF Conc.	Rate	Removed
DATE	CONSTITUENT	(scfm)	(ppb)	(lbs/day)	(scfm)	(ppb)	(lbs/day)	(scfm)	(ppb)	(lbs/day)	(gpm)	(μg/L)	(lbs/day)	(lbs/day)
April 1998	Trichloroethene	1,350	540	0.35	140	57	0.00	160	100	0.01	30	140	0.05	0.41
April 1998	cis-1,2-DCE	1,350	1,000	0.53	140	110	10.0	160	200	0.01	30	1,190	0.43	0.98
April 1998	Vinyl Chloride	1,350	0	<u>0.00</u>	140	7	<u>0.00</u>	160	0	0.00	30	240	0.09	<u>0.09</u>
	Total			0.88			0.01			0.02			0.57	1.48
October 1998	Trichloroethene	2,575	2,900	3.60	140	48	0.00	160	300	0.02	56	83	0.06	3.69
October 1998	cis-1,2-DCE	2,575	3,500	3.54	140	50	0.00	160	250	0.02	56	254	0.17	3.73
October 1998	Vinyl Chloride	2,575	0	0.00	140	0	0.00	160	0	<u>0.00</u>	56	110	<u>0.07</u>	<u>0.07</u>
	Total			7.14			0.01			0.04			0.30	7.49
April 1999	Trichloroethene	2,730	94	0.12	98	8	0.00	112	21	0.00	71	254	0.22	0.34
April 1999	cis-1,2-DCE	2,730	210	0.23	98	21	0.00	112	47	0.00	71	1,560	1.33	1.56
April 1999	Vinyl Chloride	2,730	15	0.01	98	2	0.00	112	2	<u>0,00</u>	71	210	0.18	<u>0.19</u>
	Total			0.36			0.00			0.00			1.73	2.09
Nov/Dec 1999	Trichloroethene	2,590	540	0.68	187	9	0.00	213	23	0.00	47	120	0.07	0.75
Nov/Dec 1999	cis-1,2-DCE	2,590	1,300	1.32	187	24	0.00	213	89	0.01	47	888	0.50	1.83
Nov/Dec 1999	Vinyl Chloride	2,590	29	0.02	187	4	0.00	213	0	0.00	47	120	0.07	0.09
	Total			2.01			0.00			0.01			0.64	2.66

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion;  $\mu g/L$  = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

<sup>(1)</sup> Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

<sup>(2)</sup> VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

<sup>(3)</sup> VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

<sup>(4)</sup> VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

<sup>(5)</sup> SE Area air flow rate based on sum of the six branch line field measurements.

Table 15

Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems

Wayne Reclamation & Recycling

											Air	r Stripper <sup>(4)</sup>		Sum of
		SE Area	SVE Sy	stem (1)	AST Area - S	VE Bra	nch Line G (2)	AST Area - S	SVE Bra	nch Line H (3)	Groundwater	IN minus	Removal	VOCs
		Air Flow Rate <sup>(5)</sup>	Conc.	Removal Rate	Air Flow Rate	Conc.	Removal Rate	Air Flow Rate	Conc.	Removal Rate	Flow Rate	EFF Conc.	Rate	Removed
DATE	CONSTITUENT	(scfm)	(ppb)	(lbs/day)	(scfm)	(ppb)	(lbs/day)	(scfm)	(ppb)	(lbs/day)	(gpm)	(μg/L)	(lbs/day)	(lbs/day)
April 2000	Trichloroethene	1,500	710	0.51	187	590	0.05	213	50	0.01	51	250	0.15	0.73
April 2000	cis-1,2-DCE	1,500	1,400	0.82	187	330	0.02	213	150	0.01	51	1,450	0.89	1.75
April 2000	Vinyl Chloride	1,500	0	0.00	187	0	0.00	213	0	0.00	51	170	<u>0.10</u>	<u>0.10</u>
	Total			1.34			0.08			0.02			1.15	2.58
October 2000	Trichloroethene	1,500	750	0.54	187	710	0.06	213	78	0.01	55	120	0.08	0.69
October 2000	cis-1,2-DCE	1,500	1,300	0.77	187	300	0.02	213	190	0.02	55	1,580	1.04	1.85
October 2000	Vinyl Chloride	1,500	0	0.00	187	0	0.00	213	0	0.00	55	170	<u>0.11</u>	<u>0.11</u>
	Total			1.31			0.09			0.02			1.24	2.65
April 2001	Trichloroethene	1,600	140	0.11	105	57	0.00	120	48	0.00	65	190	0.15	0.26
April 2001	cis-1,2-DCE	1,600	150	0.09	105	21	0.00	120	70	0.00	65	1,230	0.96	1.06
April 2001	Vinyl Chloride	1,600	0	0.00	105	0	0.00	120	0	0.00	65	146	0.11	<u>0.11</u>
	Total			0.20			0.00			0.01			1.22	1.44
Oct/Nov 2001	Trichloroethene	1,600	410	0.32	225	150	0.02	225	0	0.00	90	241	0.26	0.59
Oct/Nov 2001	cis-1,2-DCE	1,600	1,500	0.94	225	130	0.01	225	0	0.00	90	1,447	1.56	2.52
Oct/Nov 2001	Vinyl Chloride	1,600	0	0.00	225	3	0.00	225	0	0.00	90	121	<u>0.13</u>	<u>0.13</u>
	Total			1.26			0.03			0.00			1.96	3.24

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion; µg/l. = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene.

<sup>(1)</sup> Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

<sup>(2)</sup> VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

<sup>(3)</sup> VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

<sup>(4)</sup> VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

<sup>(5)</sup> SE Area air flow rate based on sum of the six branch line field measurements.

Table 15
Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems
Wayne Reclamation & Recycling

											Ai	r Stripper <sup>(4)</sup>		Sum of
		SE Area	SVE Sy	stem (1)	AST Area - S	VE Bra	nch Line G (2)	AST Area - S	SVE Bra	nch Line H (3)	Groundwater	IN minus	Removal	VOCs
		Air Flow Rate <sup>(5)</sup>	Conc.	Removal Rate	Air Flow Rate	Conc.	Removal Rate	Air Flow Rate	Conc.	Removal Rate	Flow Rate	EFF Conc.	Rate	Removed
DATE	CONSTITUENT	(scfm)	(ppb)	(lbs/day)	(scfm)	(ppb)	(lbs/day)	(scfm)	(ppb)	(lbs/day)	(gpm)	(μg/L) -	(lbs/day)	(lbs/day)
April 2002	Trichloroethene	2,600	330	0.41	245	22	0.00	245	48	0.01	65	74	0.06	0.48
April 2002	cis-1,2-DCE	2,600	370	0.38	245	27	0.00	245	60	0.01	65	692	0.54	0.93
April 2002	Vinyl Chloride	2,600	18	0.01	245	0.92	0.00	245	2.1	0.00	65	160	<u>0.12</u>	0.14
	Total			0.80			0.01		^ ·	0.01			0.72	1.54
October 2002	Trichloroethene	1,200	430	0.25	280	180	0.02	(susp)	0	0.00	44	300	0.16	0.43
October 2002	cis-1,2-DCE	1,200	790	0.37	280	0	0.00	(susp)	0	0.00	44	1,359	0.72	1.09
October 2002	Vinyl Chloride	1,200	0	0.00	280	0	0.00	(susp)	0	0.00	44	220	<u>0.12</u>	0.12
	Total			0.62			0.02			0.00			0.99	1.64
April 2003	Trichloroethene	1,300	270	0.17	640	280	0.09	(susp)	0	0.00	50	268	0.16	0.42
April 2003	cis-1,2-DCE	1,300	470	0.24	640	190	0.05	(susp)	0	0.00	50	1,405	0.84	1.13
April 2003	Vinyl Chloride	1,300	0	<u>0.00</u>	640	0	0.00	(susp)	0	0.00	50	134	<u>0.08</u>	<u>0.08</u>
	Total			0.41			0.13			0.00			1.09	1.63
October 2003	Trichloroethene	2,100	240	0.24	420	260	0.05	(susp)	0	0.00	44	180	0.10	0.39
October 2003	cis-1,2-DCE	2,100	340	0.28	420	0	0.00	(susp)	0	0.00	44	1,694	0.90	1.18
October 2003	Vinyl Chloride	2,100	0	0.00	420	0	<u>0.00</u>	(susp)	0	0.00	44	140.7	<u>0.07</u>	0.07
	Total			0.52			0.05			0.00			1.07	1.64

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion;  $\mu g/L$  = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene. (susp) = The operation of Branch Line H was suspended in October 2002.

<sup>(1)</sup> Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

<sup>(2)</sup> VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

<sup>(3)</sup> VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

<sup>(4)</sup> VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

<sup>(5)</sup> SE Area air flow rate based on sum of the six branch line field measurements.

Table 15

Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems

Wayne Reclamation & Recycling

											Air	r Stripper <sup>(4)</sup>		Sum of
		SE Area	SVE Sy	stem (1)	AST Area - S	VE Bra	nch Line G (2)	AST Area - S	SVE Bra	nch Line H (3)	Groundwater	IN minus	Removal	VOCs
		Air Flow Rate <sup>(5)</sup>	Conc.	Removal Rate	Air Flow Rate	Conc.	Removal Rate	Air Flow Rate	Conc.	Removal Rate	Flow Rate	EFF Conc.	Rate	Removed
DATE	CONSTITUENT	(scfm)	(ppb)	(lbs/day)	(scfm)	(ppb)	(lbs/day)	(scfm)	(pph)	(lbs/day)	(gpm)	(μg/L)	(lbs/day)	(lbs/day)
April 2004	Trichloroethene	1,000	0	0.00	470	360	0.08	(susp)	0	0.00	67	149	0.12	0.20
April 2004	cis-1,2-DCE	1,000	160	0.06	470	160	0.03	(susp)	0	0.00	67	690	0.56	0.65
April 2004	Vinyl Chloride	1,000	0	<u>0.00</u>	470	0	0.00	(susp)	0	0.00	67	147.9	<u>0.12</u>	<u>0.12</u>
	Total			0.06			0.11			0.00			0.79	0.97
October 2004	Trichloroethene	900	180	0.07	470	350	0.08	(susp)	0	0.00	48	336	0.19	0.34
October 2004	cis-1,2-DCE	900	330	0.09	470	170	0.02	(susp)	0	0.00	48	772	0.45	0.56
October 2004	Vinyl Chloride	900	0	0.00	470	18.4	0.00	(susp)	0	0.00	48	260	<u>0.15</u>	<u>0.15</u>
	Total			0.16			0.11			0.00			0.79	1.05
April 2005	Trichloroethene	860	323	0.11	280	105	0.01	(susp)	0	0.00	74	251	0.22	0.35
April 2005	cis-1,2-DCE	860	742	0.19	280	64.6	0.01	(susp)	0	0.00	74	1,670	1.48	1.68
April 2005	Vinyl Chloride	860	0	0.00	280	0	0.00	(susp)	0	0.00	74	210	<u>0.19</u>	0.19
	Total			0.31			0.02			0.00			1.89	2,22
October 2005	Trichloroethene	560	230	0.05	218	260	0.03	(susp)	0	0.00	113	205	0.28	0.36
October 2005	cis-1,2-DCE	560	400	0.07	218	290	0.02	(susp)	0	0.00	113	1,711	2.32	2.41
October 2005	Vinyl Chloride	560	0	0.00	218	0	0.00	(susp)	0	0.00	113	168.7	<u>0.23</u>	0.23
	Total			0.12			0.05			0.00			2.83	3.00

IN = Influent; EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute: ppb = parts per billion;  $\mu g/I$ . = micrograms per liter; lbs = pounds; gpm = gallons per minute: DCE = dichloroethene. (susp) = The operation of Branch Line H was suspended in October 2002.

The soil vapor extration (SVE) and air sparge (AS) systems were temporarily shut down on November 13, 2005 for assessment of the vadose zone and was restarted in April 2006.

<sup>(1)</sup> Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

<sup>(2)</sup> VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

<sup>(3)</sup> VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

<sup>(4)</sup> VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

<sup>(5)</sup> SE Area air flow rate based on sum of the six branch line field measurements.

Table 15

Volatile Organic Compound Removal Rates - Soil Vapor Extraction and Air Stripper Systems

Wayne Reclamation & Recycling

											Air	r Stripper (4)		Sum of
		SE Area	SVE Sy	stem (1)	AST Area - S	VE Bra	nch Line G (2)	AST Area - S	VE Bra	nch Line H <sup>(3)</sup>	Groundwater	IN minus	Removal	VOCs
		Air Flow Rate <sup>(5)</sup>	Conc.	Removal Rate	Air Flow Rate	Conc.	Removal Rate	e Air Flow Rate Conc. Removal Rate			Flow Rate	EFF Conc.	Rate	Removed
DATE	CONSTITUENT	(scfm)	(ppb)	(lbs/day)	(scfm)	(ppb)	(lbs/day)	(scfm)	(ppb)	(lbs/day)	(gpm)	(μg/L)	(lbs/day)	(lbs/day)
April 2006	Trichloroethene	1,020	309	0.13	213	197	0.02	(susp)	0	0.00	93	157	0.18	0.33
April 2006	cis-1,2-DCE	1,020	458	0.14	213	805	0.05	(susp)	0	0.00	93	928	1.04	1.23
April 2006	Vinyl Chloride	1,020	0	0.00	213	0	<u>0.00</u>	(susp)	0	0.00	93	110	<u>0.12</u>	<u>0.12</u>
	Total			0.27			0.07			0.00			1.34	1.68

IN = Influent: EFF = effluent; Conc. = concentration; scfm = standard cubic feet per minute; ppb = parts per billion;  $\mu g/L$  = micrograms per liter; lbs = pounds; gpm = gallons per minute; DCE = dichloroethene. (susp) = The operation of Branch Line H was suspended in October 2002.

The soil vapor extration (SVE) and air sparge (AS) systems were temporarily shut down on November 13, 2005 for assessment of the vadose zone and was restarted in April 2006.

<sup>(1)</sup> Volatile organic compound (VOC) removal rate based on air flow rate and VOC concentrations measured in combined Southeast (SE) Area soil vapor extraction (SVE) line with air sparging off.

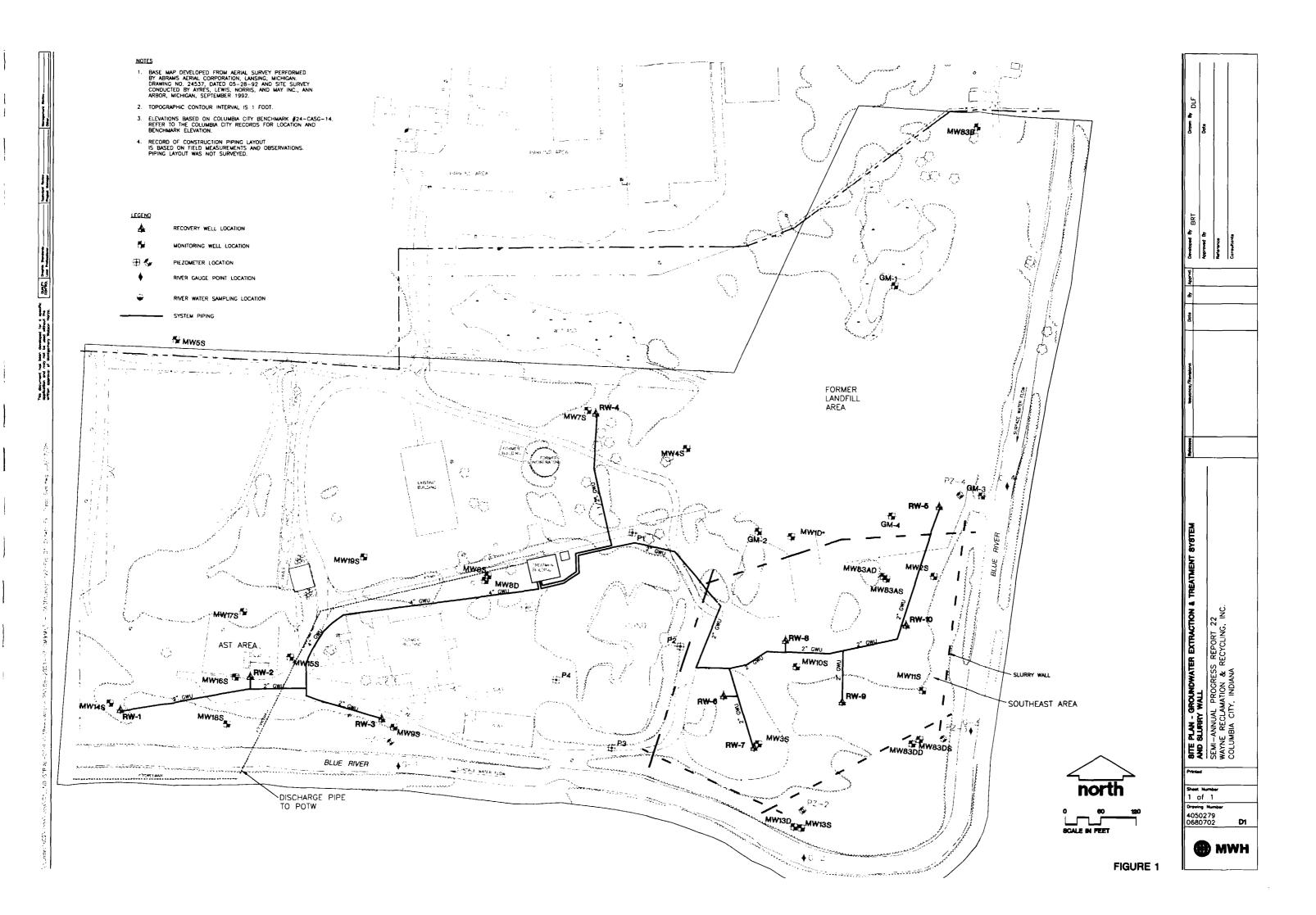
VOC removal rate based on air flow rate and VOC concentrations measured in Aboveground Storage Tank (AST) Area Branch Line G.

<sup>(3)</sup> VOC removal rate based on air flow rate and VOC concentrations measured in AST Area Branch Line H.

<sup>(4)</sup> VOC removal rate based on groundwater flow rate and difference between groundwater influent and effluent concentrations.

<sup>(5)</sup> SE Area air flow rate based on sum of the six branch line field measurements.

**FIGURES** 



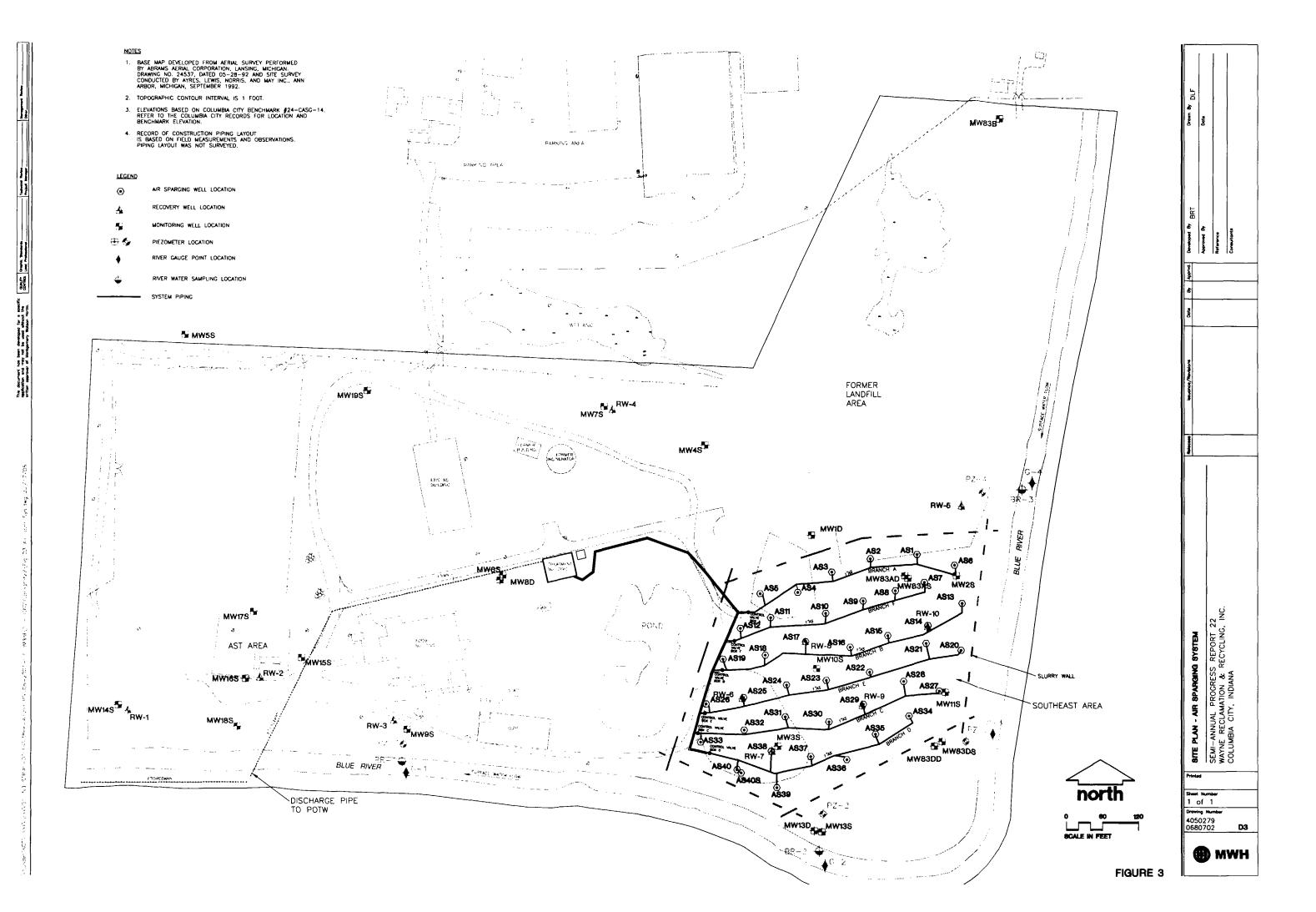


Figure 4
Summary of Groundwater Treatment and SVE Systems Combined Air System Effluent Data
Wayne Reclamation & Recycling

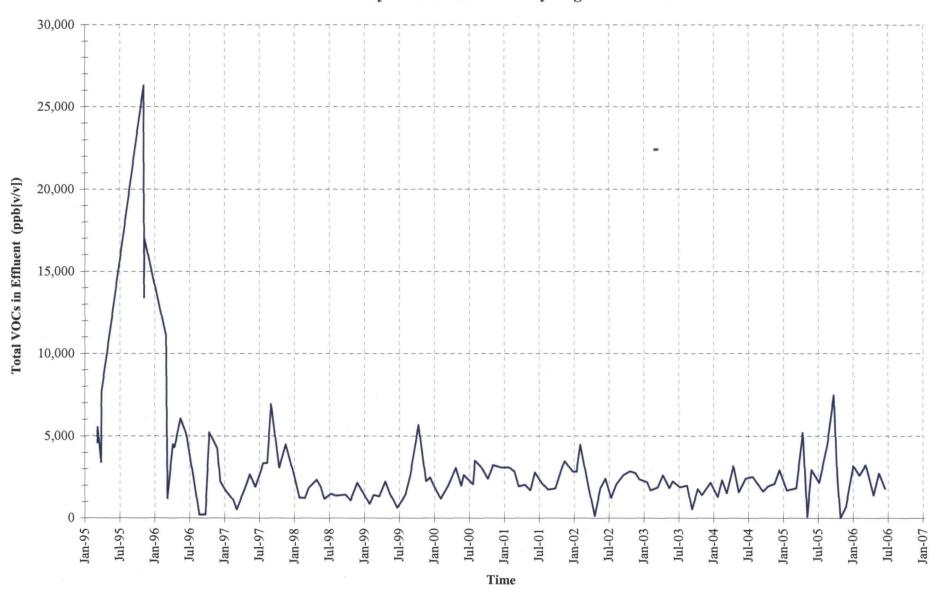
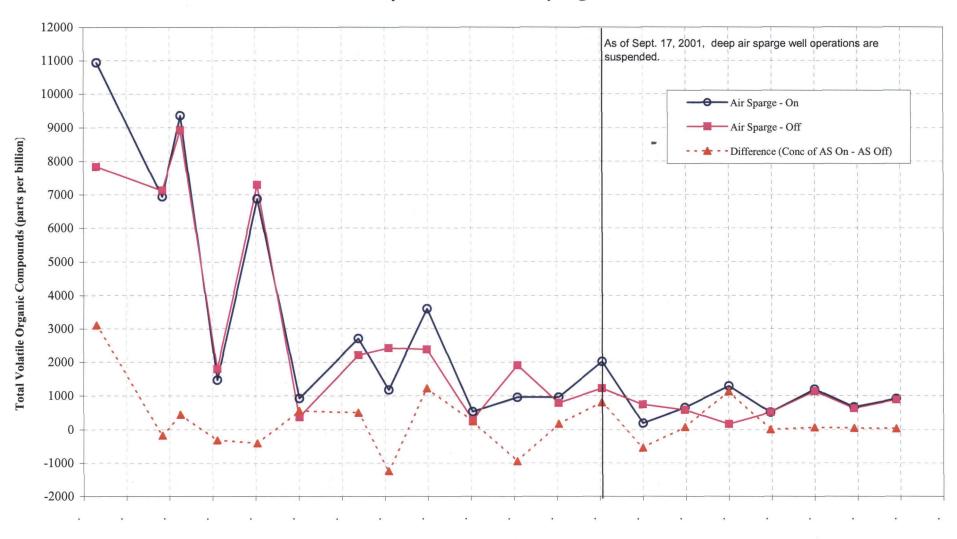


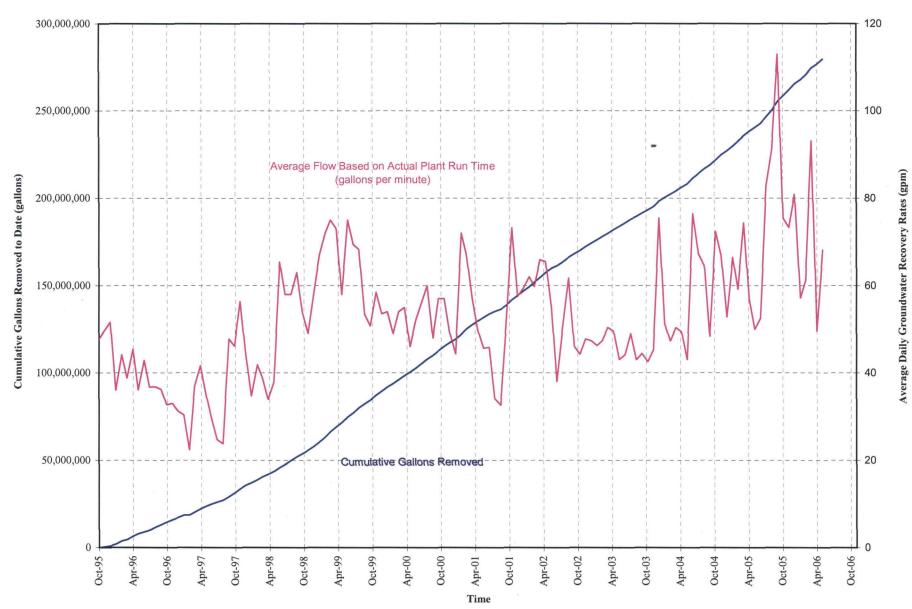
Figure 5

Effect of Air Sparge on Soil Vapor Extraction Volatile Organic Compound Concentrations, Southeast Area
Wayne Reclamation & Recycling



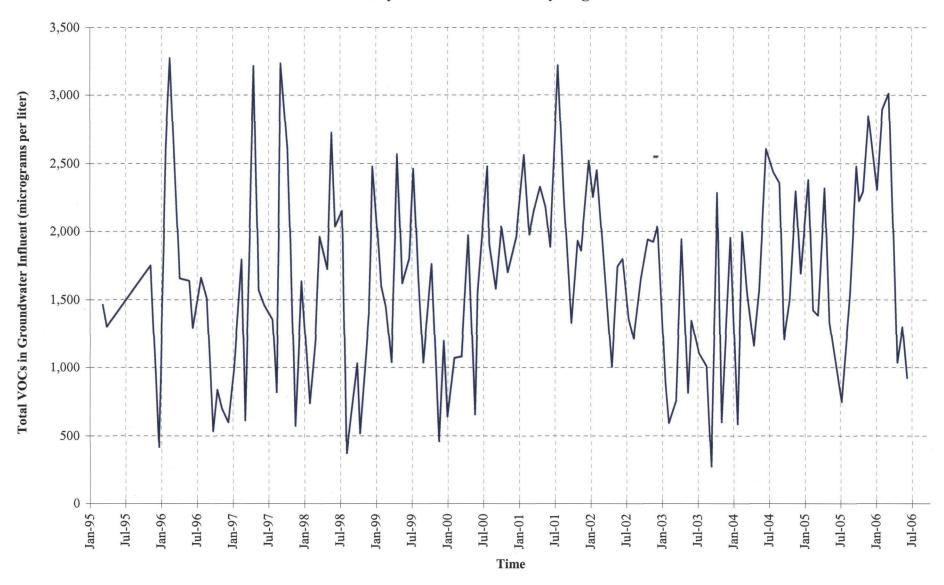
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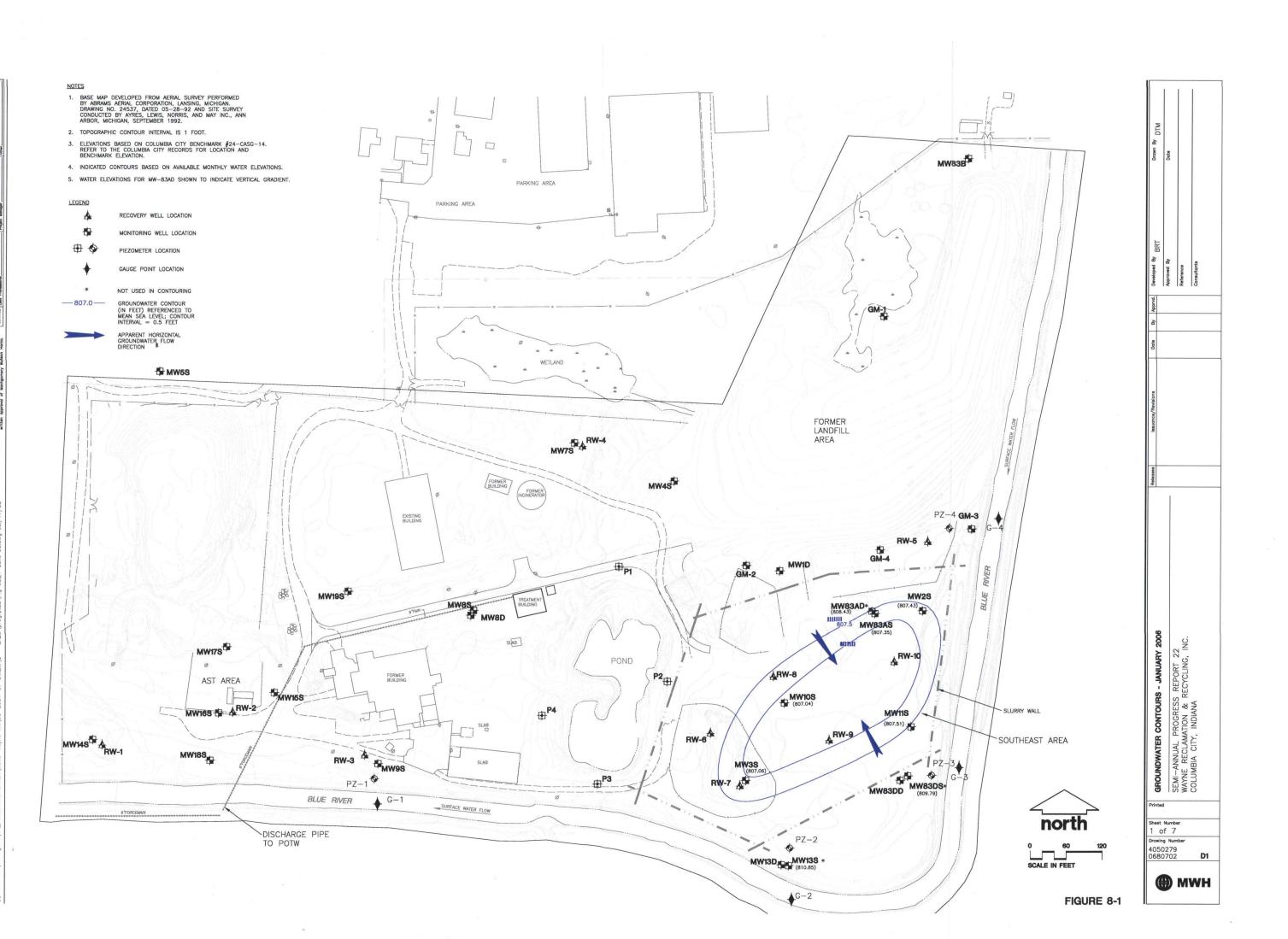
Figure 6
Cumulative and Sustained Groundwater Recovery
Wayne Reclamation & Recycling



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Figure 7
Summary of Groundwater Treatment System Influent Data
Wayne Reclamation & Recycling





This document has been developed for a specific quarry application and may not be used without the quarry



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FIGURE 8-2

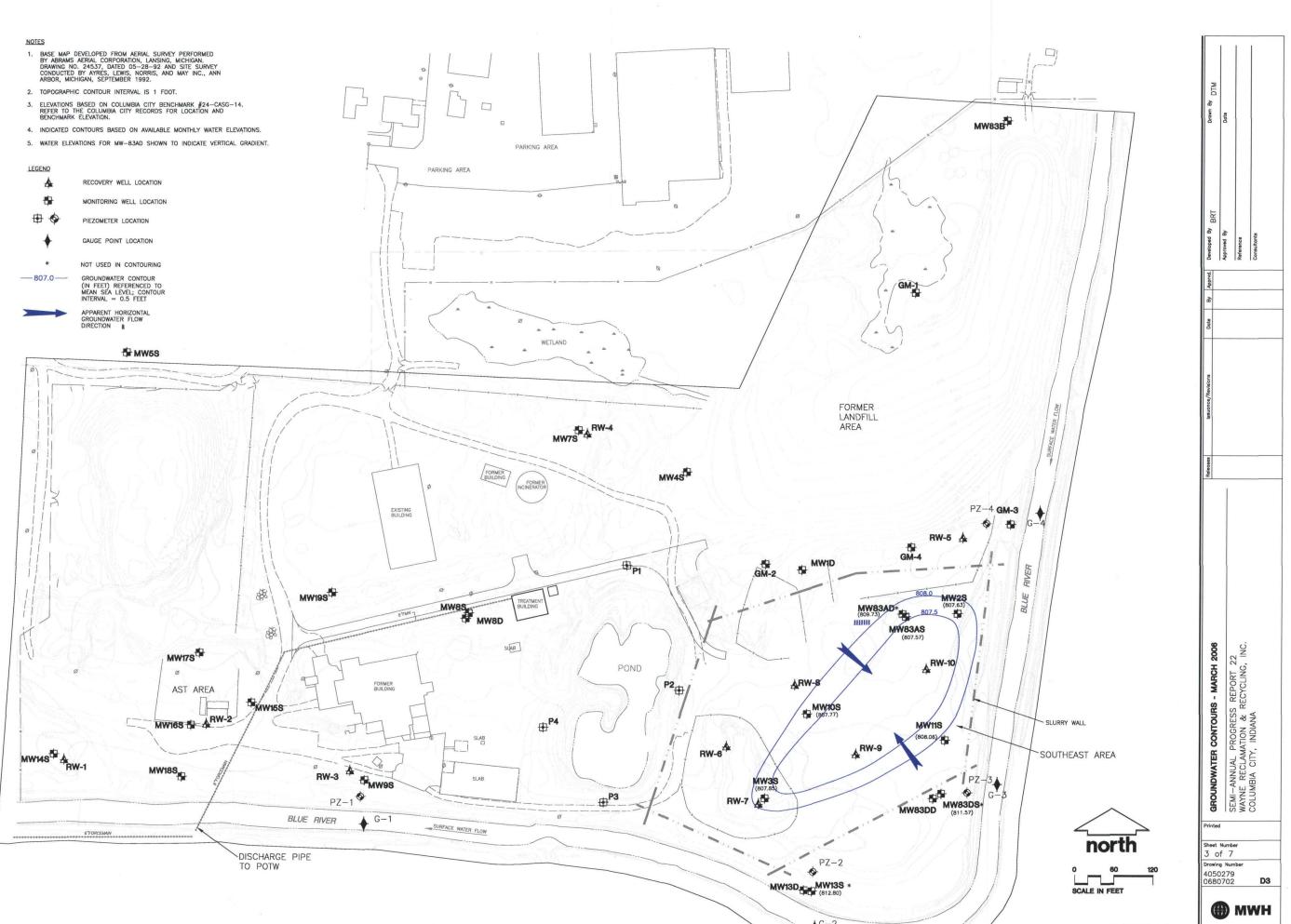
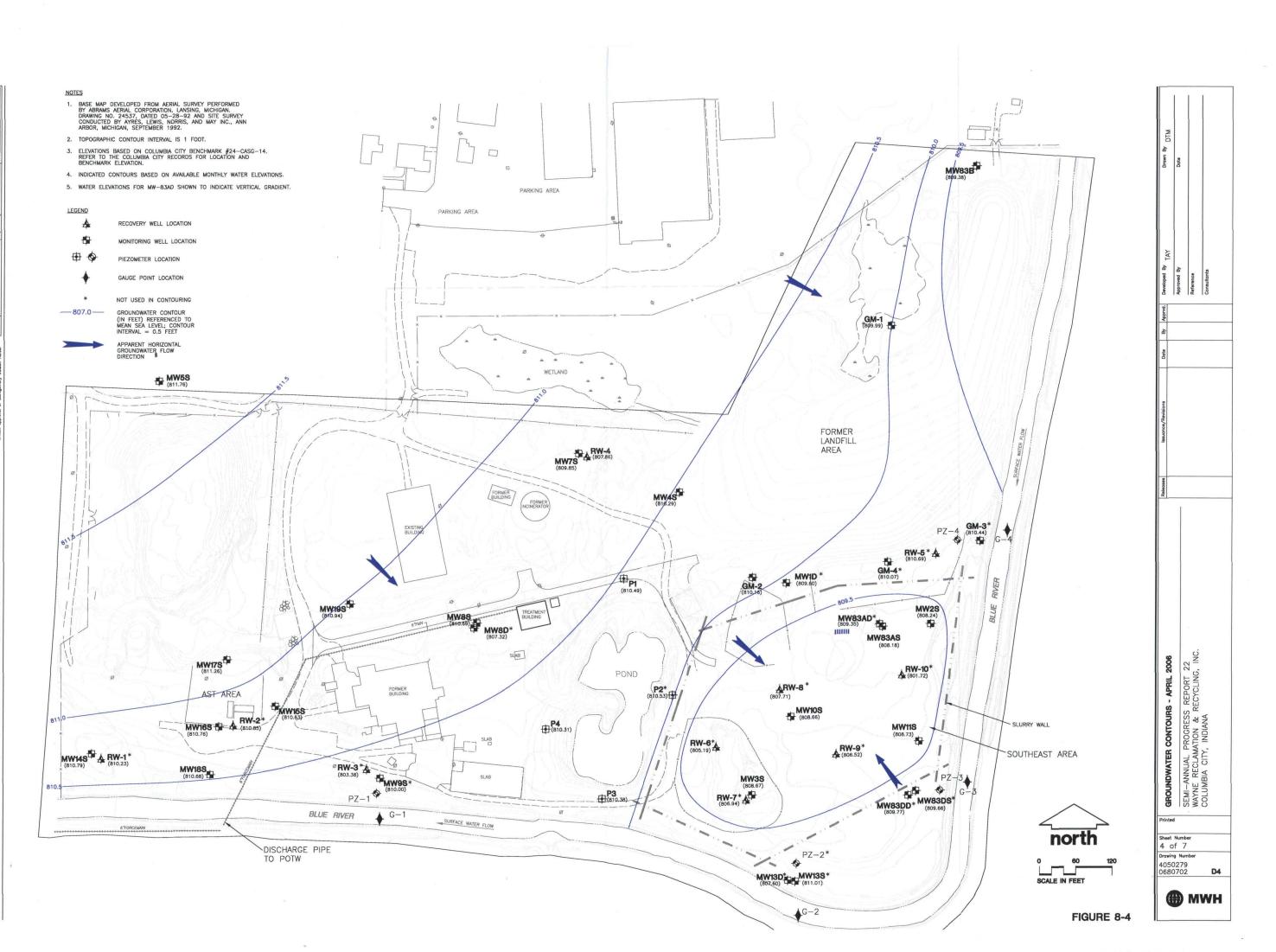


FIGURE 8-3



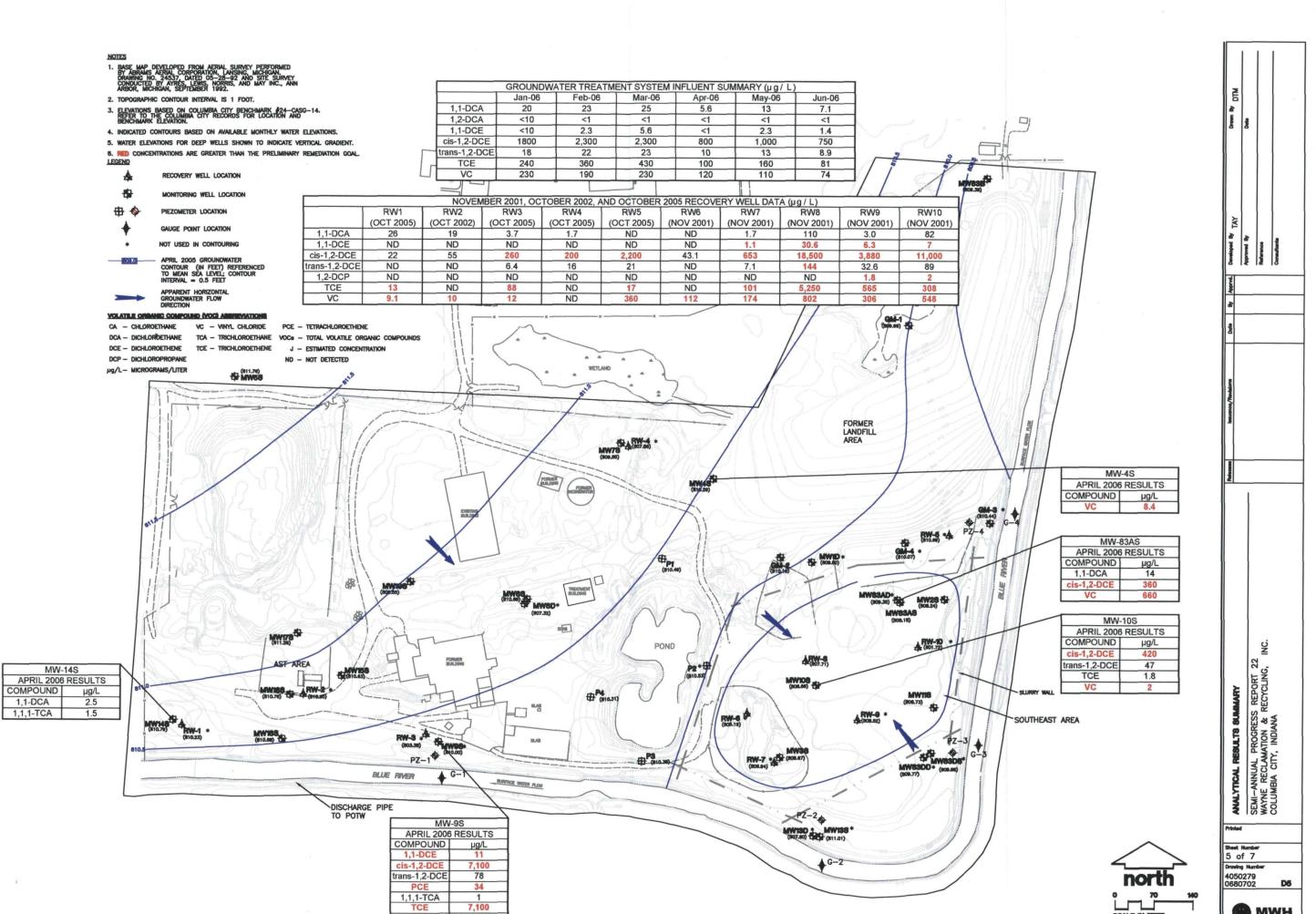
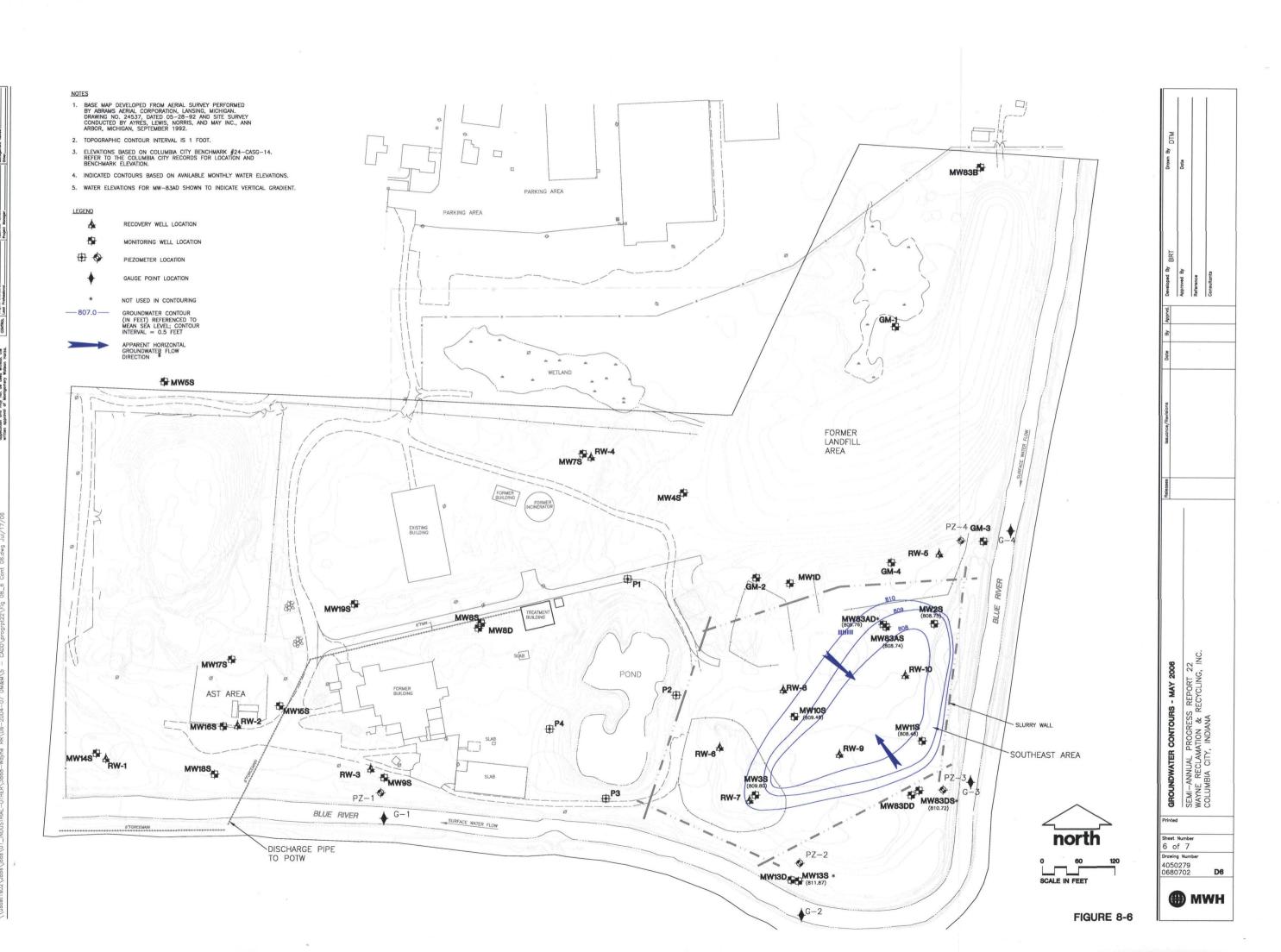
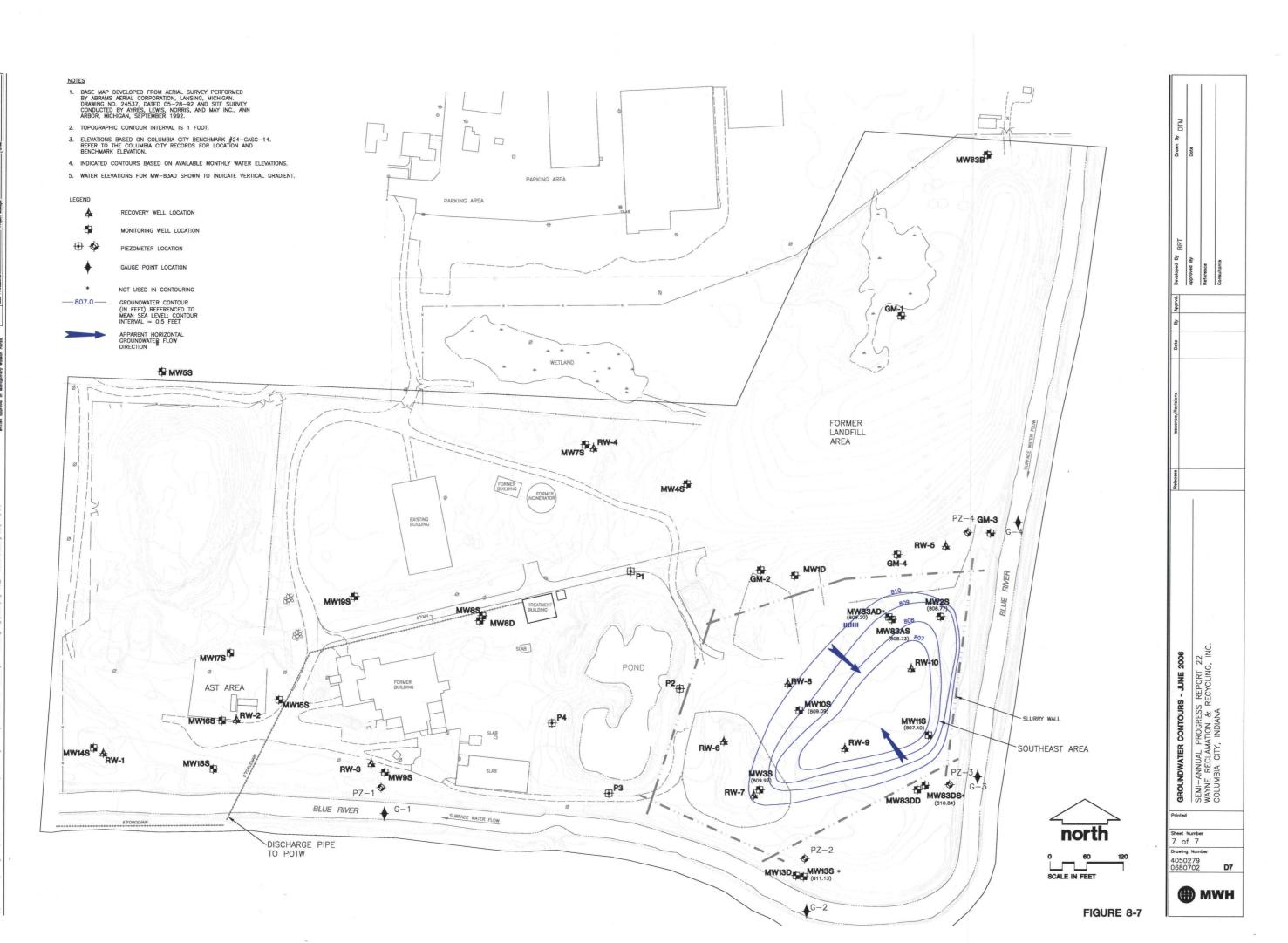


FIGURE 8-5

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Figure 9
Summary of Site Volatile Organic Compound Removal Rates - Soil and Groundwater Remediation Systems
Wayne Reclamation & Recycling

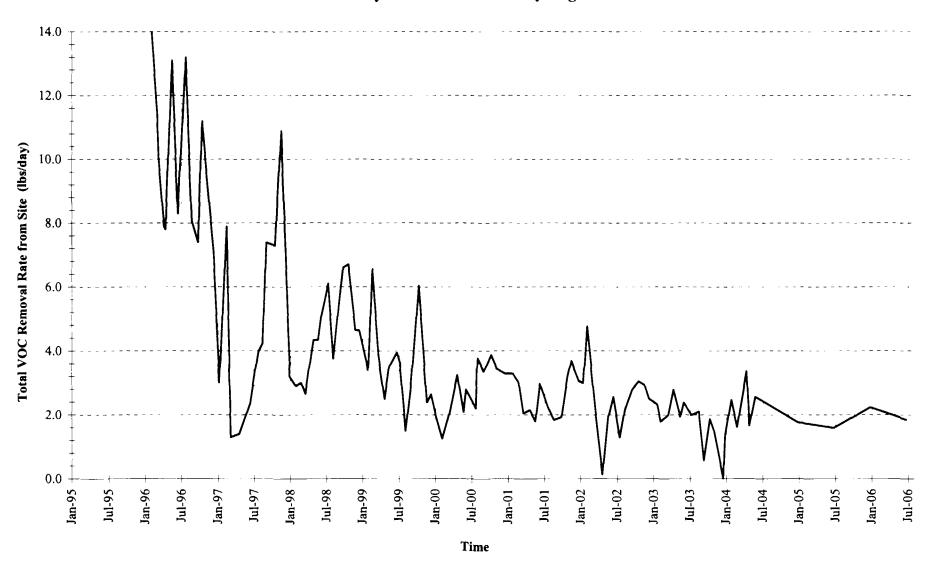
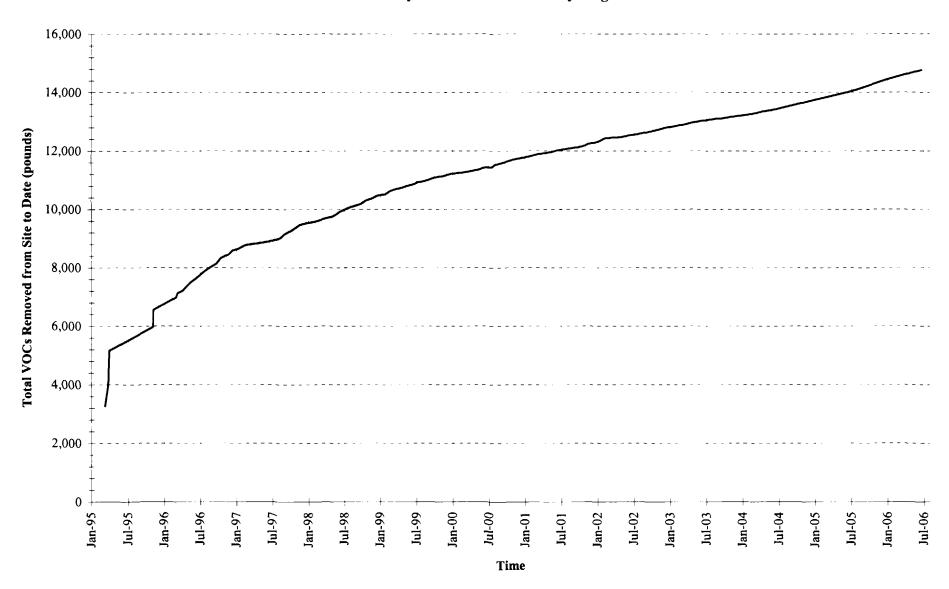
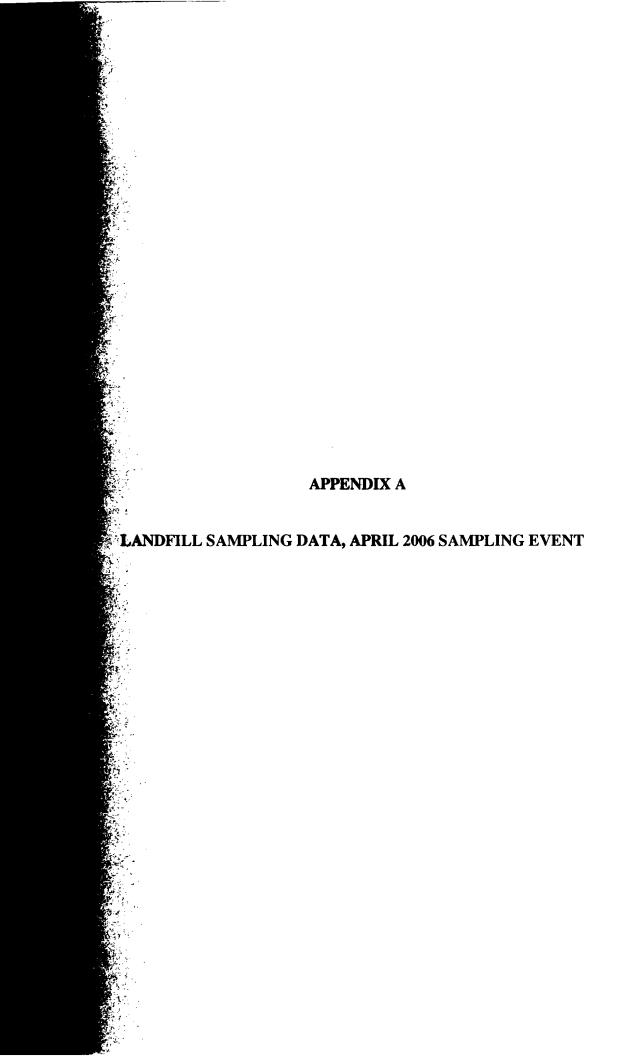


Figure 10
Cumulative Volatile Organic Compounds Removed From Site - Soil and Groundwater Remediation Systems
Wayne Reclamation & Recycling









### **BURGESS & NIPLE**

Mr. Jeffrey P. Walker Outside Operations Manager City of Columbia City 112 S. Chauncey Street Columbia City, IN 46725 Re: City of Columbia City
Wayne Reclamation & Recycling Facility
April 2006 Groundwater Sampling Event

June 22, 2006

Burgess & Niple, Inc. 5085 Reed Road Columbus, OH 43220 614 459,2050 Fax 614 451,1385 Dear Mr. Walker:

Burgess & Niple, Inc. (B&N) has completed this report to provide you with additional information that is not included in the formal report submitted to the U.S. Environmental Protection Agency (EPA), as required by the facility's Operation and Maintenance Sampling and Analysis Plan (OMSAP) (Geraghty & Miller, Inc., October 1993). B&N completed groundwater sampling and analysis of four monitoring wells located at the Wayne Reclamation and Recycling Facility (WRRF) in the City of Columbia City, Indiana on April 25, 2006. The following sections summarize the results of the most recent sampling event. Figure 1 displays the groundwater monitoring network. Attachment 1 includes the field-sampling sheets and chain-of-custody form completed during the most recent sampling event. Attachment 2 contains the analytical laboratory report submitted by TestAmerica Analytical Testing Corporation (TestAmerica). Time-versus-concentration plots generated from the groundwater quality data are presented in Attachment 3.

### **METHODS**

Groundwater elevations were measured at each well using an electronic water-level measuring tape. The depth to the bottom of each well was also measured. Measurements were made to the nearest 0.01 foot and recorded on field-sampling sheets. The well stick-up was measured to the nearest 0.1 foot and recorded.

Field-sampling personnel completed a wellhead inspection of each well documenting any evidence of activity near the well, the condition of the protective casing, any insect or rodent intrusions, or other notable conditions.

Disposable polyethylene bailers were used to purge each well of a minimum of five well volumes prior to sampling. Field parameters (pH, specific conductance, temperature, and turbidity) were measured and recorded during well purging. Sampling began once at least five well volumes were removed and the field parameters stabilized (within  $\pm 10$  percent). Purge water was disposed of on the ground away from each well, as specified by the facility's OMSAP.

Groundwater samples were collected from the four monitoring wells (GM-1, GM-2, GM-3, and GM-4). One duplicate was collected at GM-4 by splitting each bailer of water between two sets of sample containers. One field blank was collected to evaluate possible cross-contamination from the field-sampling equipment. Deionized water was poured into a disposable bailer and transferred into the sample containers. The laboratory prepared one trip blank (two 40-milliliter [ml] vials of deionized water) and sent it along with the sample containers. Field personnel filled the sample containers and placed them in a cooler that was chilled with ice to 4 degrees Celsius (°C) or cooler. Groundwater samples were delivered to TestAmerica for analysis.

TestAmerica analyzed the groundwater samples from the four monitoring wells, the duplicate sample, and the equipment blank for ammonia (Method 350.1), chloride (Method 325.3), chemical oxygen demand (COD) (Method HACH 8000), sodium (Method 6010B), and volatile organic compounds (VOCs) (Method 8260B). The trip blank was analyzed for VOCs only.

#### RESULTS

Table 1 includes all historical groundwater quality results reported for the WRRF, including the results of the April 25, 2006 groundwater sampling event. VOCs included in Table 1 are only those parameters historically detected at the facility. All other VOCs have been reported below the respective laboratory detection limits.

Most of the inorganic concentrations reported for GM-1, GM-2, GM-3, and GM-4 during the most recent groundwater sampling event were within the respective range of historical results. The lowest historical concentration of ammonia in GM-2 was reported during the April 2006 sampling event.

There were no VOCs reported above the laboratory detection limits in either GM-1 or GM-2 during the April 2006 sampling event. This is consistent with historical results for these two wells. Except for vinyl chloride, all detected VOCs in GM-3 and GM-4 were within the respective range of historical concentrations. The vinyl chloride result for GM-3 was the lowest value reported for that well over the last 21 sampling events. The vinyl chloride concentration in GM-4 was the highest value historically reported for that well.

Time-versus-concentration plots were constructed for ammonia, chloride, COD, sodium, and each of the historically detected VOCs. Historical results from each of the monitoring wells are included on each plot for comparative purposes. No increasing trends in inorganic constituents are evident. It appears that each of the detected VOCs in GM-3 and GM-4 have stabilized, or depict a decreasing trend in concentration, since 2000.

The following comments are made for wells GM-3 and GM-4 where organic compounds have been consistently detected:

GM-3 (cis-1,2-dichloroethene [DCE]) – concentrations indicated an overall increasing trend from June 1997 (17 micrograms per liter [μg/l]) to a maximum value of 150 μg/l in October 2001. Since October 2001, concentrations have shown an overall decreasing trend, with latest concentrations reported at 34.4 μg/l. The U.S. EPA primary Maximum Contaminant Level (MCL) for cis-1,2-DCE is 70 μg/l.

- GM-3 (vinyl chloride) concentrations have been reported above the MCL of 2 μg/l for each sampling event since June 1995, with the exception of the January 1996 sampling event which reported a non-detect value of <1.0 μg/l. The historical maximum concentration of 54 μg/l was reported in October 2001. Since then, concentrations of vinyl chloride have indicated an overall decreasing trend with the latest concentration reported at 12.6 μg/l in April 2006, which was the lowest value reported for that well over the last 21 sampling events.
- GM-4 (1,1-dichloroethane [DCA]) concentrations steadily increased from June 1996 (4.0 μg/l) to a high of 26 μg/l in April 2003, but appear to have stabilized since then, with the latest concentrations reported at 21 μg/l in October 2005 and 20.6 μg/l in April 2006. There is no primary MCL established for 1,1-DCA.
- GM-4 (1,1-DCE) concentrations consistently increased from December 1997 (less than 0.5 μg/l) to a maximum value of 7.1 μg/l in October 2001, which was actually slightly higher than the primary MCL of 7 μg/l. Since then, the last nine semiannual analytical results have all been lower.
- GM-4 (cis-1,2-DCE) concentrations spiked to a high of 570 μg/l in June 2001. Since then, concentrations have shown a decreasing trend with latest result of 173 μg/l reported for April 2006. The primary MCL for cis-1,2-DCE is 70 μg/l.
- GM-4 (trans-1,2-DCE) concentrations spiked to a high of 20 μg/l in October 2001. Since then, concentrations have shown a decreasing trend with latest result of 11.6 μg/l reported for April 2006. The primary MCL for trans-1,2-DCE is 100 μg/l.
- GM-4 (1,1,1-trichloroethane [TCA]) previously, concentrations were concluded as having an overall increasing trend from December 1999 (143 μg/l) to October 2002 (380 μg/l). However, concentrations consistently decreased from October 2002 to October 2003. During the April 2004, October 2004, April 2005, and October 2005 semiannual sampling events, concentrations were reported at 180 μg/l, which are lower than the MCL of 200 μg/l. During the most recent April 2006 semiannual sampling event, TCA was again reported slightly above the MCL at 229 μg/l. Although this most recent sampling event produced a concentration above the MCL, GM-4 appears to show an overall decreasing trend since 2001.
- GM-4 (trichloroethylene [TCE]) previously, concentrations were concluded as having a consistently increasing trend from June 2000 (440 μg/l) to October 2002 (1,300 μg/l). From October 2002 to October 2003, concentrations depicted an overall decreasing trend with a concentration of 440 μg/l in October 2003. However, TCE appears to be trending upward once again, as concentrations have consistently increased from 620 μg/l in April 2004 to the most recent concentration of 980 μg/l in April 2006. The primary MCL is 5 μg/l for TCE.

GM-4 (vinyl chloride) - in June 1998, concentrations began to exceed the primary MCL of 2.0 µg/l, reaching a previous maximum value of 8 µg/l in December 2000, and then fluctuated just above the MCL for the next nine sampling events. In October 2005, the value was back down to non-detect (less than 1.0 µg/l); however, the April 2006 result of 11.2 µg/l was the highest value reported for this well.

Table 2 includes historical groundwater elevations and other well data recorded at the facility. Groundwater elevation data prior to December 1999 was not available. Groundwater elevations increased between October 2005 and April 2006 from a minimum of 0.55 feet at GM-3 to a maximum of 0.97 feet at GM-2.

If you have any questions or comments, please do not hesitate to call.

Sincerely,

1 R.Akino Michael R. Akins **Project Geologist** 

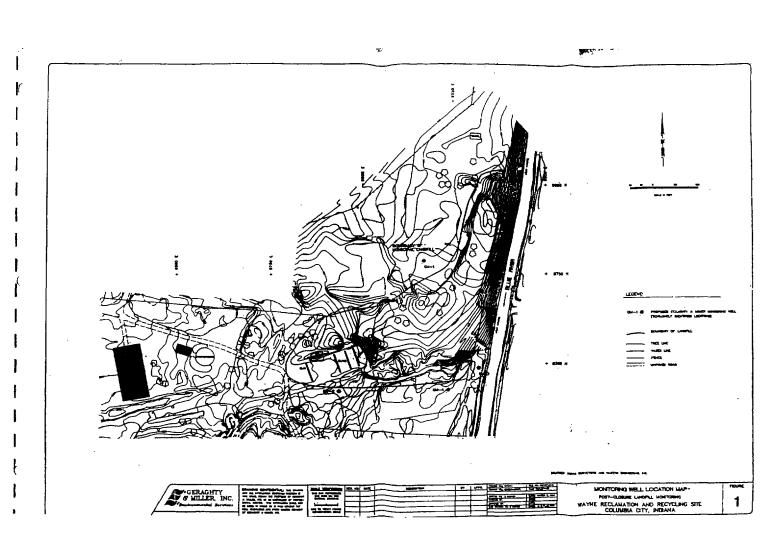
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Attachments Mr. Howard Lowen, Columbia City (w/att)

Mr. Bruce Hamilton, Indiana Dept. of Environmental Management (w/att)

Mr. Scott Sondles, B&N (w/att)

Mr. Dan Forlastro, Engineering Management, Inc. (w/att)



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J. Dankingson	. 70		<10	<1.0	413	41.0	<1.0	418	41	43	43	413	450	<3.0	<18	<10	514	4.0	4		4	4	4	v
I, I, I. Tradet-realiza-		200	41.0	414	41.8	11.0	<1.0	<1.0	Ē	43	43	<1.0	49	41.0	<1.0	<1.0	4.0	414	4	. <1	41	4	۵	Ÿ
1,1,2-Trushingariyas		1 1	4	43	40.5	48.1	48.5	405	Ē	43	45	<1.8	4	41	4	41	41	45	43	41	41	ŧ	7	•
Trichloroothera	-	3	<10	<10	411	11.0	419	414	E.	43	45	<1.0	47	419	418	<10	413	41.8	4	<1	41	=	٧	<1
Ymyl Chloride		1	<10	<1.6	<1.0	¥1.0	<10	4.8	4	45	45	110	- 77	<1.0	<13	<10	413	<1.8	4	4	-41	4	V	₹
Pieté Personatura																								
и	30	4541(5)	-	1	-		-	-			I	Τ-	213	745	7.0%	7.31	7.41	7,10	ננו	74	7.91	4.10	133	7.04
Spords Continues				1 -	-			-				760	813	715	324	734	184	784	894	41	723	467	TN	744
Temperature	-¢	-		T . =	-		-	- 1		·		113	12.9	10.0	114	10.3	104	113	121	12.7	12.0	Ē	11.9	13.3
Tedriday	עווא	1(AL)			-		-					-	•	11	n	10.5	144	14.0	1 13	79	i i	11111	1 11	16

All other VOCs have been increasedly below belonging detector to

- U.S. EPA Motorger Contrasper Level (MEA) - U.S. EPA Harris Hooks Advancy

(5) = Security U.S. EPA MET.

Depricate complex collected of CD4-4

## Yabir I quasionnd) Wayor Reclamation and Recycling Freih City of Calumbia City Groundersian biguitaring Program

										_					_						_			_	
T-record	Name	HO.	Jun-95	1=44	1 - 2	h- 62	L = 61	D- 01						GH-)	Jan-St	001		~-	4	- m	4	0		~ *	4
				-	1				100.00			W-71		1		Out-		122		1 000	***	-	-	(200)	
			_	_							_	_				_					_			_	
	-	N COM	L	4.9	11	4.78	114		_14	[33	L		9.39	9.79	6.52	842	0.51	0.76	0.57	6.33	645	0.36	8.4	0.46	0.46
Dámais		200 (5)	23	. 14	1 75			-	_25	4	<u> </u>	_		_ 44		28	<u> </u>	12	67_	n	_ 9	21	24	11.7	35
Contact Copper Descript (COD)			2	10		. 30	<b>Q9</b>	<b>OR</b>	<u> </u>	24	22	<13	מ	10	14		72	1_11			В	9	p.	*	199
	ì		×	14	7.14	17		L <sub>M</sub>	*	22	16.4	14.3	177	21.5	.33.3	3	122	28.4	W1.	19.7	157	17.2	12.5	21.4	723
فعموس منبون شده																									
(معنظ البقد أوغيش) مجمعت (			<10	<10	418	<10	<10	<10	<10	<10	410	<10	- 19	<10	<10	<10	40	<10_	410	<10	44	<10	٩	<10	<12.1
) i Districture	1	-	43	414	410	<1.0	<1.0	<14	43	45	443	<1.0		413	<10	4.0	41.0	44	-	4	41	٠	-4	41	<1.0
z.) Oldinostas		7	9	43	44	41	43	43	95	41	45	41.0	- 3	499	43	43	45	40	43	4.5	41	43	4	405	41.0
cls-1,2-Oktomentone	1	70	94	10	- ×	17	17	38	*	2	154	66.7	110	12	61	150		180	11	77	,,	17	٠,	SS	744
non 1,7 Dicksonton		100	41.0	41.0	41.0	<1.0	44	<1.9	0.6	89	40.5	<1.0	4	410	<1.0		<1.0	7	4	41	41 "	٠,	q	<1	<1.0
1.3-Diddengroupes	-		<10	<10	<1.0	414	410	41.0	45	43	45	<1.0	<.	40	40	<1.9	418	<1.0	<1		. 4	<b>&lt;</b> I	4	<1_	<1.0
I, L I Trinkburgature	7	700	<1.0	<1.0	41.8	<1.0	<1.0	<1.0	43	-95	40	419	-5	<1.0	41.0	4.0	<1.0	<14	4	<1	- 51	<1	4	۹_	<1.0
1.). Türkimyekser		3	42	4,5	44	40.5	40.5	483	48.1	45	4.1	410	4	43	43	45	48,5	44.5	483	40.5	-4.5	ē	۵	41	<1.0
N-1		, ,	<1.8	<1.0	44	<1.0	<1.0	_<>	49.5	491	40	49	8	<1.0	413	41.0	44	<18	4	4	41	2	۵	_	<1.0
Virgi Chimig	1	1	10	414		9	ע	\$	n	72.6	n	16.6	. ×	_ Zt	74	34	10	41_	19	-	27	1	. 17	20	<1.0 13.6
Part Personal																									
all .	£υ	13110		-	T -	-			-		·		774	72	7.00	799	6.00	7.39	759	LAB	7.86	719	172	7.31	753
Specific Conductories	-	-	-	$\overline{}$		Ţ-	-		-	-	T :-	130	415	767	363	415	414	445	779	336	568	179	414	440	548
Temporation	eC	-		<u> </u>			Γ					16.9	13.4	12	- 13	14.6	16	16.7	67	10	84	157	12.	177	24
Turpottate	ž	SIAN					-						-65	H	13	ж	29.2	74.	N	140	45	777	323	334	>1,000

#### Wayne Recitionates and Recycling Facility City of Columbia City Groundwater Manifesting Program

							_																		
l														C34-4											
P of the later	Veite	MCL,	¥	<b>1-7</b>	lun H	Jap 97	H=22	Dee-17	Jun 16	300-57	*	ě,	8	Dec-60	1	Q0-44	A+49	Oc: 42	April 1	Ont-03	40.00	Qm M	Agr-45	Dev-05	Apr 44
- puls																									
	-	30 (HBLA)	8.37	033	034	8.28	413	0.37	3.1	9.497	4.5	0.24	e NI	1.46	0.36	0.33	0.79	0 21	. 4.31	123	8.22	0 17	0.30	6.31	0.37
Chimde		230(3)	מ	40	12	13	1	- 11	12	16		19	7	•	,		•	4	7		,	,		42	<5
Chemist Orygon Darmet (COD)			120	N T	47	**	<b>**</b>	49	35	30	20	411	11	2	-	- 15	1)	•	-8		70	22	- 45	<b>39</b>	70
			31	41	ת_ים <u>י</u>	25	18	26	25	40	21	12	17.6	27.3	146	15.1	10.2	116	11.0	7.86	1.99	843	7.84	160	137
Valuatio Corgania Compression																									
ومصدر الجام الجونيون مصمحي	-		<10	129	110	<10	416	<10	<10	416	510	(71)	< 10	<10	<10	<10	110	<18	<14	<16	<10	< 10	7	< 10	<11.5
I.I-Delivered	-		<1.0	40.0	41.0	10	17	IJ.	11	16	14	13	19	10	77	25	17	20	×	70	15	14	14	21	28.6
1,1-068	-	7	43	- i	410	410	48.5	41	1.2	33		37	<5	47	7.0	7.1	-	31	u	1-,-	31	6.1	-72	4.0	4.1
co-1,2 Delteretten			134	140	190	360	250	120	19	323	ָנֹאָב ֹ	350	190	179	570	239	110	180	190	* *	110	100	110	110	173
Deligraphic	-	160	<1.0	41.0	<1.0	12	10	14	13	163	13	14	13	10	18	20	14	14	15	1 11			4.7		110
1,1-D-Marray		3	<1.0	41.0	41.5	<1.0	41	40.5	43	40.	•1	a	45.0	40	•	<10	410	51.0	~		41	-, -	- 2	<1	410
1.1,1-Trinkingsband		300	100	41.9	380	148	140	210	120	144	191	143	170	110	410	260	130	380	160		180	180	120	190	219
1 i 2 Trichisensius		3	•	65	-03	-	41	-01	9.7	-	403	43	-	41	•1	44	48.5	91	u	.,	86	403	- 2	<b>485</b>	410
Treblevorber		,	414	340	536	250	430	690	-	462	354	405	440	44	1,980	860	670	1.300	140	400	430	748	739	130	760
Vayl Olivrids	1	1	410	411	414	410	90	<10	71	117	12	4.9			1241	1		7	-	1 7			La ·	<b>*1</b>	11.2
Flaid Parameters																									
	30	134300	-	-	-	-	-			T -	-	T -	734	7.62	4.99	731	725	120	7.31	7 70	729	6.92	7 45	7 10	124
Specific Combinatory		-	-	:-			-			-		690	964	1.141	153	-	640	671	729	413	732	619	611	227	922
Типрипичн	-c	-			T -			<b>—</b>				15.2	12.0	119	101	12.1	••	151	11.1	124	10.1	1113	113	137	34
Turketer	MIN	3 (AL)		-:-	-					<u> </u>	<del>                                     </del>	<del></del>	<del></del>	- 21	79	12 9	124	17.0	23	T	100	14		110	110

All older VOCA have been instantially below inhomony detects

"-US EPA Magazine Continuous Level
(SINA)-US EPA Moto Routh Advisory

[3] -Secondary U.S. EPA MC.

[AL] -U.S. EPA Agone Level

[AL] -U.S. EPA Agone Level

## Table I (continued) Wayne Retirmation and Recycling Facility City of Calumbia City Caramitrator Manharing Program

		i	L						Page	C14-9						
Per septem	1944	É	Se Se		Day-66	į	Qu-BI	4	On St	4	0+40	Apr-04	00-84	Ass 40	Qu-45	April 1
ner yeaks																
Accounts .	I	30 (10 M)	875	631	844	9.34	**	6.79	9.24	434	1.36	6,21	, <b>4.3</b>	8.27	434	8.36
Chimide	-91	298 (8)	19	,	[2]	3	EL.	1	4	,		1		4	41	9
Chemical Drygge (Secured (COD)	7		<15	24	•	1		14	=	8	4	. 10	-	7	*	19
	-		12.8	21.3	į	3	13.8	10.5	1.33	11.1	7.00	8.70	1.47	7.84	163	144
Votado Organic Componento																
(مستحا لوقت ليشدني مستحدة	*		(B)	< 50	<10	<10	<10	<10	<10	<18	<10	<16	<10	9	<10	<12.5
I,I-Dialement	-	-	15		19	21	24	18	77	23	30	14	14	T 13	×	124
I.I-Dishteradore		7	45	41	44	- 62	69	44	\$1	-67	3.0	3.7	41	72.0	17	44
m-1.3-Della velice	-	79	244	190	290	340	190	200		216	110	110	130		110	173
- 1,3 Dager and Comment	-	160	13	))	14	17	70	15	43	- II	11		-	77	10.0	122
2-Distance	-	,	43	448	33	•	40	44	419	41	41	٠,	-	4	4	413
1.1,1-Trialignordia=1	1	260	143	170	230	-	110	-	410	279	77	170	199	170	100	277
I,I,I-Trophippenhare	-	3	<3.3	-0	45	44	8.9	e.	2	-	84	13	45	49	43	<1.0
Triable-reduced	-	5	434	440	49	300	610	140	1,400	130	440	30	798	730	140	L#00
Virgi Chipmir	-	2	43	4	•	7	1	- 3	1	-	T-	7	3	42	<1	121
Publi Personalists																
	Lu	63-4.500	-	7,14	7.60	4.99	751	123	123	7.35	7.70	729	658	7.45	1.10	134
Spends Conductority			-	-	1141	333	230	440	OI.	729	411	774	619	618	127	-
Talantari	1 2	-	15.2	12.9	11.9	10.0	12.1	9.9	101	1111	12.4	10.0	133	113	127	1 14
Turkidan	MIN	TIAL	<u> </u>		21	29	219	17.4	37.0	25	31	30	· ·	67	110	114

## Table I (continued) Wayne Recinqueue and Recycling Fucility Olty of Columbia City Groundwater Monitoring Program

	1													-											
	U-in-	MCI.	J=-75	lea-M	Jan. 94	J=-97	Jun. 91	Dec-97	le H	Jap 77	Jun-99	Dec-#9	l00	Dec-40	Jap ()	On 41	App-82	00-42	App-46	0=40	Apr del	Oct-01	Apr 45	00-81	April 1
marganiss																								-	_
	1	30 (HBMA)	4610	49434	41M	4134	4000	4.00	8.77	4311	49 010	420	98	40.01	48	4.65	48	48	486	48	4.85	48	4	40.85	400
- Marrie	-	230 (S)	<1.0	410	410	<1.0	13	410	<10	418	<10	19	<1	<1.0	41.0	7		1	7	T-4	<۱	<1	41	ন	1 5
Therman Organ December (COD)	- 70	-	90	Q0	( No.	- 20	- 30	*	1115	<u> </u>	413	413	•	41.0	<1.0	1 3	9	_0	4	T-9-	1	<b>79</b>	4	ব	1.00
Seelings			<b>**</b>	49	<b>49 10</b>	49.90	14	430	×	420	42	W1	45	6.75	673	0.00	449	£13	0.40	8.10	4 ×	40	4 14	• 11	41
votelle Organic Components															-										_
( بنجيم ارڪ <u>انڪايا</u> عصبيتال ا	7	$\overline{}$	<10	₹16	-18	<10	<10	410	<10	410	<10	<18	- OH	<10	<10	40	⊴0		40	<10	< 10	410	4	<10	412
J-Dichierychen	-	-	<1.0	<10	<10	<1.0	<1.0	<1.0	- 65	1 40	405	410	7	410	<18	<1.8	<1.8	41.0	a	व	<1	a	4	4	<1.1
J.S. Disking days	7-5-	····	45	405	43	4,	403	42	493	35	40.5	<1 D	-	41	4.5	4.5	45	-0.5	45	45	40	45	4	405	<i t<="" td=""></i>
De 1,2 Dichlerschare	-		456	40	40	40	410	41	903	-	405	<19	4	41	200	43	4.5	45	45	43	41	483	9	405	41
may 1.3 -Digitarostiana		180	<10	410	410	<10	<10	51.0	403	41	403	<10	9	410	<10	<1.0	41.0	410	41	1 4	<1	- J	0	<1	411
) J. Diebbyrgergere	-	3	410	41 ê	410	<1.0	419	<1.0	493	49.5	405	<10	45.0	439	4.0	<1.0	4.8	<10	9	i	41	a	4	i -	41.6
I.I.I Traditional	T	300	410	<1.0	<1.0	<10	<1.0	<1.0	43	(IP	40.1	<1.0		<10	< 1.0	<1.8	410	<10	4	1 5	<1	व	4	41	41.5
I.I.2 Trichlyrophone			45	405	95	48.5	40.1	45	463	43	40.5	<1.0	3	45	445	415	4.5	45	43	43	-	4.5	9	90.5	40
Traditionalities	T	1	<10	41.8	110	410	<10	51.0	903	40	403	<1.0	4	<1.0	<10	1	40	418	-	-4	41	9		<1	<1.4
Very Chiarles		7	<10	41.0	<10	<10	<1.0	<18	403	43	405	<10	4	410	<1.8	<1.0	<14	-<10	4	न	4	9	- a	<1	ना
Publifuracius																									
ii .	84	4343 (5)	<u> </u>	т-	T -		T -		T -	T :	T -	_	-	T -	-	-	T -		-	-			-		T -
Specific Complexioner			1	1 -	1 -	1	-		T			-	<u> </u>			T		_	-	·	7			T = -	T
Carriery	-	· ·	-	1	Τ.	· ·			T	† · · · ·	t -	-			-	-	<u> </u>	-		-	<del>  -</del>				1 -
Turbulay	MILL	3 (AL)	<del></del>	+		t	t	<u> </u>	· .	<u> </u>		†·				<del></del>		-		<b>†</b> -				-	<del>-</del>

All offer VOCs have been hearing and the statemary detection to

- 1.5 ESI, Ministers Commission Level
(064) - 1.5 ESI All hearing Hearing Annual Level
(064) - 1.5 ESI All hearing Hearing Annual Period (164) - 1.5 ESI All hearing Hearing Annual Period (164) - 1.5 ESI All hearing Hearing Annual Period (164) - 1.5 ESI All hearing and Dephase searches mellicated at CRL4 - 18 capacitated

#### Table I <u>juminosely</u> Wayne Reference and Respekting Facility City of Calandia City Greendootte Meastering Program

																		_					_		
Paragram		MCL.	1-61					D. 47	land.	1	T == ==	Page 400			) 	C-101	4-6	040		0 81		A		- American	45.00
				4-7-					100	100		U-717	777			UV.		4	19000	90-0		- T- T-			
		TH (MEA)	449	4430	40	- 00			400	4010	_			_		-	T -	· -	_	_	_				$\overline{}$
Otenda	t ==	230 (8)	44	41.0	113	11.0			<10		+-:-	+ ·	<u> </u>		H		<u> </u>	-		_	-:-	⊢ <del>-</del>		ا <del>- ب</del> ا	
Comp Name (COD)	-		i i	- 49	-	- 25	-:-:		43	-:-	<b>1</b> ∵ 1	ł —		<u> </u>					1-		+ <del></del>				
	-		1 and	43	4.9	48	-		430	an⊤		-	<u> </u>	- <del>-</del> -		-	<u> </u>			<del>-</del> -	<del></del>				
Valuatio Organic Compression																									
(مجمعة لوطن لوطنية)	T		<18	49	<10	<10	<16	410	<10	×10	<10	410	49	< 10	<#	<10	<14	<10	< 10	418	<10	<10	7	<18	สม
I <sub>a</sub> l-Department	-		49	<1.0	<10	410	<1.0	<10	41	400	41	41.0	9	410	-13	418	<1.0	<1.0	4	1 5	- i	4	4	4	<1.0
1,1-Diahamentum		,	40.5	45	140	43	483	240	48.5	41	43	<b>410</b>	- 45	40	40	45	43	483	43	41	43	40.5	4	43	<10
i J Deliverine	-		44	41	40	40	<10	40	40.1	43.3	43	419	43	-0.3	- LED	45	45	43	45	40	45	403	4	4.1	<10
Tan 1,2 Distriction		- III	419	4.0	<1.0	<4.6	4.0	<10	49.5	405	49.5	<1.0	7	<1.8	<1.0	410	41.0	<1.0	9	41	<1	<1	a	<1	41.0
1.7 Deltinger		,	416	415	419	43	419	<10	40.5	40.5	45	<1.0	43.0	-34	<14	<1.0	<1.0	41.0	- I	<1	<1	4)	4	<1	À
1,1,1-Yesterophyra		*	94	<1.5	41.0	<1.0	41.0	<1.0	40.5	43	43	<1.0	4	<10	<1.0	41.0	<1.0	<1.0	4	<1	<1	4	Q	<i< th=""><th>41.0</th></i<>	41.0
1.1.2 Trialipped	-		41.0	9.8	<1.0	41.8	41.9	<10	45	45	45	<1.0	- J	43	43	41	485	-415	40	45	455	43	4	40.5	<10
Trichmenton		3	<1.0	<1.0	<1.0	<1.0	41.0	419	48.5	4.	4.5	<1.9	4	410	+1.0	<1 €	<10	<1.0	4	41	1. 4	۷۱ -	Q	41	<1.0
Viryl Chloride	4		410	<1.0	418	<14	414	41.0	Ť	45	45	<1.8	d	<1.0	<1,0	<11	<19	SIA	<u> </u>	ব	41	_ <1 _	¢	٧.	<10
Pali Paymonts																									
	SUL	1747(3)		-	I						T	-			T.=	-	_ = _	-	1	I -	L -	-	i		
Specialis Conductores		=			1		-	-		1	1	-	] -	-	1		-		1	T -		-	l	-	100
Targette	<u> </u>		·	-								-	1		1										
Turkiday	MTU	3 (AL)	-							<u> </u>	L -		· ·		-		I _=_								

All other VOCs have been been willy below blooming determine to

"-U.S. EPA Manusan Consuments Love (ISSA) - U.S. EPA Nation Health Advance (S) - Secondary U.S. EPA MCT

(AL) = U.S. EPA Amper Level Deplement ampère collected at GM-1

- Yes Application

## Table 2 City of Colombia City, Incisora Wayna Recinention & recycling Facility Groundwater Elevations & Well Data

			<del></del>												
1	TOC Devetor				,		,	Dopth to Water	r (feet BTOC)		,	<del>,</del>			
Well No.	(fort small)	11/11/99	6/29/89	12/5/66	(AAA)	19/25/81	A/73/02	10/15/02	4/18/03	18/11/83	4/23/64	30/33/64	4/15/45	19/14/95	4/25/84
OM-I	\$41.03	31.26	30 19	3161	30.31	29 54	29.24	31 64	31.31	30 23	30 64	31.07	29 84	31.70	3) 04
ONLL	833.24	2).65	22.00	23.44	22.11	21.45	21.12	21.75	23.32	22.39	2.0	23.21	21.67	24.05	23 04
GM-)	621.84	11 74	10 69	12,45	. 11 23	£ 46	10.51	12.40	12 06	11.16	11.79	1237	11.79	12.97	12.42
QM-4	2027 37	16 54	15 33	17 16	16.39	(3.5)	15 17	17.21	14.79	15 78	16 59	17 14	16.56	17 99	17 30
MW-45	842.94			33 43	1201	31 52	30 92	23 15	33.17	32 02	32.42	32.90	31 48	33 76	<b>72 M</b> 0

	TOC Elevation							Grandwater Ele	vallen (feet stad)	)					
Wall No.	(feet enail)	12/13/99	6/29/04	12/3/06	4/4/01	34/35/01	ยวาคา	14/15/02	4/18/93	19/17/93	6/23/46	19/22/94	4/15/05	19/14/95	4/25/04
ON-I	841 03	809,77	B10 M	909.43	810.72	\$11.49	331,79	809,39	209 52	810.81	810.35	NO9 94	211 19	809.33	109.99
QM-2	133.34	809.50	\$11.16	209,64	111.06	0)1,79	813.12	\$09.49	309.92	11104	116 35	810.03	811 57	809 19	810 16
GM-J	B22.86	81112	\$12.17	810 41	111.13	314.40	812.35	\$10.46	810 78	\$11.70	310.91	B10 49	811.05	109.89	B10 44
OM-4	127 37	810.83	112 04	B10 39	810.98	F13.96	812.20	810.16	810.58	B11 59	1)0.72	818.23	21681	BO9.34L	#10 D7
MW-45	842 94		_	809 51	£10.91	811 42	812.02	809.39	209.77	\$10 92	B)O 52	\$10.04	B11.46	309 18	\$10.14

	TOC Develor							Well Stiel	-Up (feet)						
Wed No.	(free squal)	12/13/1999	6/29/2000	12/5/2000	644/3001	18/25/2001	4/23/2007	19/15/2002	4/12/2003	16/17/2003	4/23/2004	19/22/2004	4/15/2005	19/14/2005	4/25/2004
OM-I	\$41.03	21		19	19	2.1	1.3	21	1.8	1.0	1.8	2.0	20	21	2 a
CM-2	833.24	2.5	_	21	2.2	2.1	2.2	23	22	2.2	21	]4	2.5	2.5	14
CM-3	822.86	2.1	-	20	20	23	19	23	19	20	2.0	1.2	22	12	1)
OM-4	627.37	33		2.6	2.5	30	2.5	3.0	26	27	2.6	19	19	2.9	29
MW45	842.94	-		-	-	3.0	26				1.3	28	17	2.6	17

	TOC Bleveton							Dayth to Bette	a (feet STOC)						
Wolf Na	(Test small)	12/13/1999	6/19/1000	12/3/2000	6/4/3001	10/25/3001	4/23/2002	10/13/2003	4/18/2003	34/17/3003	4/23/2064	H9/23/2004	4/15/2005	19/34/3895	625/2004
OM-1	\$41.03	35 10	34.84	34,84	344	34.86	34.81	34.11	34 91	15.05	34.96	34.97	34 97	35.00	35 02
OM-2	333 24	39 04	30.87	38.64	38 86	34.88	38,83	38.83	38 80	33.05	38.82	38 62	38 12	38.83	30 01
C94-3	122.14	27 95	27.72	27 75	27.75	27.74	27.71	27.71	27 68	27.72	27.64	27 @	27 68	27,48	27 65
CB4-4	927.37	28 17	27 93	27 93	77 95	27.95	27.91	27 91	27 89	27 92	27 90	27.90	27.90	27.90	27 88
MW-4S	842 94			39,74	J9 74	40.93	<b>© 33</b>			_	49.15	40.83	40 15	40.18	40 84

Date print to 1299 was validate
TUC = Top of cases; elevates reported by Genighty & Miller SAP
errol = shore meas are level
BTOC = below top of cases;

ATTACHMENT 1

FIELD-SAMPLING SHEETS AND CHAIN-OF-CUSTODY FORM

# GROUNDWATER MONITORING WELL RECORD FORM SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY CITY OF COLUMBIA CITY, IN

WELL NO.: GM-1	DATE: _	4-25	-06	PROJECT	NO.:	425 93		
FIELD BOOK NO.: YA	WEATHEI	<sup>Է:</sup> _ <u> </u>	cloudy }	OUTCOS	الماوال	Rein	Cool	45.50
SAMPLING CREW:		-	· ·					
WELLHEAD INSPECTION:								
Evidence of Activities at Well:	No ✓	Yes	Commen	t:				
Well Protector Condition:	Good /	Роог	Commen	t:				
Insect/Rodent Intrusion:	No J	Yes	Commen	ıt:				
Other:		}	4 A					
FIELD EQUIPMENT USED:					Date Calibi	rated:		
Water Level Indicator: Solinst			er					<del></del>
pH Meter: Hanna Orion					4	-25-06		_
Conductivity Meter: YSI C	akton 🏒	Myron L						_
Thermometer: YSI H	lanna	Oakton _v	<u>′</u>					
Turbidity: Hach HF Scientif								_
Dissolved Oxygen: Corning No.	. 1 Co					9	<del></del>	_
Other:		رام	Α		· <del></del>		_	
STATIC WATER LEVEL:		,				•		
Reference Point (RP) Elevation: Measured Level: 1st	Top Casing	g	Top Protect	ctor		Well Stick	r-up	
Measured Level: 1st	•	2nd	- **	3rd		Ave	erage	
Time/Depth: 110644/ 31.04	- "	106 AM / 3110	24 11	OB MM / 31	04		31.04	
Measured Level: 1st Time/Depth: 1064/31.04 Well Bottom: Measured Distance	e from RP	35.02		1WY= .6	<u>4</u> 874	5 WV=	3 2437	
PURGING:								
Purging Device: Dedicated P	ump	Dedicated	Pump	Disposal	le Bailer	$\checkmark$		
Grundfos Pr	ump	Bladder P	ump	Other				
Time Elapsed During Purging (mine						5.0 +	Gallons	
	<u> </u>	<del></del>		TIME (IN N	AINUTES)	<del></del>		<del></del>
MEASUREMENTS	1116AM	1118AM	1121 AM	<del>,</del>	1126AM	1128AM	<u> </u>	
Amount of Water Removed (mls.)	I	1.0	2.0	3.0	4.0	5.0		
рН (S.U.)	7.06	7.21	7.28	7.31	7.30	7.31		
Conductivity (umhos/cm)	938	883	855	849	830	833		
Temperature (°C)	6.7	6.7	6.7	6.8	6.6	6.7		
Turbidity (NTU)	301	206	148	141	122	113		
TDS (ppm)	468	439	425	424	414	416	1	
Dissolved Oxygen (mg/l)	-		-	-	-	-		
SAMPLING:						<u> </u>		
	nmn	Dedicated	Pump	Disposab	ole Bailer	/		
Grundfos P				Other				
Time Sampling Began: 1130AM		Time Com	-	IIHOM				
Characteristics of Water:	Odor	Ala		Color C	120+ w/ Si	ant Brow	mish / Ore	rnge
	-	Cleage			4.6			υρ
QA/QC Sample Collected: Duplica					e Duplicate	None	: 🗹	
REMARKS:								
* Initially the first	. 2.3 Gol	lons be	ry silty	Oronac	then c	leared.		
		<u> </u>	4		<del>_</del>		<del></del>	<del></del>
· · · · · · · · · · · · · · · · · · ·								<del>-</del> -

# GROUNDWATER MONITORING WELL RECORD FORM SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY CITY OF COLUMBIA CITY, IN

WELL NO.: GM 2	DATE:	4-25-0	6	PROJECT	NO.:	42593		
FIELD BOOK NO.: "//a	WEATHE	R: <u>over</u>	cast. Cla	oudy lig	nt Pain	Cold &	Windy	45.50.
SAMPLING CREW:								
WELLHEAD INSPECTION:								
Evidence of Activities at Well:	No ✓	Yes	Commen	t:				
Well Protector Condition:	Good 1	Poor	Comment	t:				
Insect/Rodent Intrusion:								
Other:			AIM				<del></del>	
FIELD EQUIPMENT USED:					Date Calib	rated:		
Water Level Indicator: Solinst			r					
pH Meter: Hanna Orion					4.2	5-06		
Conductivity Meter: YSI Conductivity Meter: YSI Figure 1	Dakton 🔽	Myron L						
Thermometer: YSI I	lanna	Oakton 🗹	· —			<b>\</b>		
Turbidity: Hach / HF Scienti	fic					<u> </u>		
Dissolved Oxygen: Coming No	. 1 C	orning No. 2	2					
Other:		~/A_					_	
STATIC WATER LEVEL:								
Reference Point (RP) Elevation:	Top Casing	g_ <u>√</u>	Top Protec	ctor		Well Stick-	-up	
Measured Level: 1st Time/Depth: 1s7AM/ 23.08		2nd		3rd		Ave	rage	_
Time/Depth: 1157AM/ 23.08	1157	AM/ 23.0	<b>28</b> 1	157AM/ 23,	08	23.0	8	
Well Bottom: Measured Distance	e from RP	38.81	<u></u>	1W= 2.56	399	3W= 12		
PURGING:					•			
Purging Device: Dedicated I	aauu	Dedicated	Pump	Disposal	ole Bailer	✓		
Grundfos P	ump	Bladder Pi	ump	Other				
Time Elapsed During Purging (min							<u>11</u> 0005	
	<u> </u>			TIME (IN I	ADVI ITEC			
MEASUREMENTS	1206PM	1209PM	1212PM	· · · · · · · · · · · · · · · · · · ·		1223PM	1226 BM	1229 PM
Amount of Water Removed (mls.)	I	1.0	3.0	5.0		9.0	11.0	13.0
pH (S.U.)	7.43	7.43	7.25	7.22	1.23	7.23	7.23	7.24
Conductivity (umhos/cm)	817	817	855	869		867	865	863
Temperature (°C)	5.5	5.4	5.9		5.9	6.1	6.1	6.1
Turbidity (NTU)	44		101		15	14	13	15
TDS (ppm)	409	406	428	434	432	431	432	431
Dissolved Oxygen (mg/l)	1 -	,00	- 180	-	•	-	4	•
	<u> </u>	<del>!</del> _	<u></u>	<del></del>	·	<del></del>		<u></u>
SAMPLING:			_	<b>.</b>		,		•
Sampling Device: Dedicated I				Disposal				
Grundfos P		Bladder Pr				<del></del>		
Time Sampling Began: 1230PM		Time Com		1240 PM				
Characteristics of Water:	Odor .				clear			
QA/QC Sample Collected: Duplica	Turbidity  ite Repl				v/A se Duplicate	e None	$\checkmark$	
REMARKS:								
* Initially very silty O	ronge for	~ Firs	£ 2-4	Gallors	then t	otolly C	leored.	

## GROUNDWATER MONITORING WELL RECORD FORM SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY -

CITY OF COLUMBIA CITY, IN WELL NO.: \_\_\_\_\_\_ DATE: \_\_\_\_\_\_ PROJECT NO.: \_\_\_\_\_ FIELD BOOK NO .: 7/A WEATHER: Very overcost & cloudy cold & Windy Strody Rain
45.50°

SAMPLING CREW: B otley WELLHEAD INSPECTION: No \_\_\_\_ Yes \_\_\_\_ Comment: \_\_\_\_\_ Evidence of Activities at Well: Good / Poor \_ Comment: Well Protector Condition: No Y Yes Comment: Insect/Rodent Intrusion: Other: Date Calibrated: FIELD EOUIPMENT USED: Water Level Indicator: Solinst / Soiltest Plopper \_\_\_\_ pH Meter: Hanna \_\_\_ Orion \_\_\_ Oakton / 4-25-06 Conductivity Meter: YSI \_\_\_ Oakton \_\_ Myron L \_\_\_ YSI Hanna Oakton 🗸 Thermometer: Turbidity: Hach / HF Scientific \_\_\_\_ Dissolved Oxygen: Coming No. 1 \_\_\_ Coming No. 2 \_\_\_ Other: STATIC WATER LEVEL: Reference Point (RP) Elevation: Top Casing \_\_\_\_ Top Protector \_\_\_ \_\_\_\_ Well Stick-up 2nd 3rd Measured Level: 1st Average 214 PM/ 1242 214P4/12.42 214 PM/12.42 Time/Depth: 12,42 327.65 IW: 2.48249 SWV= 12,48245 Well Bottom: Measured Distance from RP: **PURGING:** Purging Device: Dedicated Pump \_\_\_\_\_ Disposable Bailer \_\_\_\_\_ . Grundfos Pump \_\_\_\_ Bladder Pump \_\_\_\_ Other \_\_\_\_ Time Elapsed During Purging (mins.): 18 Total Gallons Removed During Purging: 130 616% TIME (IN MINUTES) **MEASUREMENTS** 23 PA 237PM 227FM 232PM 219PM 221PM 2.24 PM Amount of Water Removed (mls.) 9.0 110 1.0 6.0 130 1 3.6 pH (S.U.) 7.71 7.57 *7.5*5 7.54 7.53 7.53 7.53 Conductivity (umhos/cm) 550 579 563 579 553 550 . 548 Temperature (°C) 28 3.0 3,4 3.3 3.4 3.2 3.4 Turbidity (NTU) 739 100 236 213 1000 >1000 >1000 TDS (ppm) 289 274 274 289 280 277 275 Dissolved Oxygen (mg/l) SAMPLING: Dedicated Pump \_\_\_\_\_ Disposable Bailer \_\_\_\_\_ Sampling Device: Grundfos Pump \_\_\_\_ Other \_\_\_\_ Time Sampling Began: 240 PM Time Completed: 250FM Characteristics of Water: Color Brown Odor REMARKS: \* Equipment Blank Taken at 150 PM before purging ! Sampling

 $\rightarrow \!\!\!\!/^{L}$ 

at this well.

Duplicon This

# GROUNDWATER MONITORING WELL RECORD FORM SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY -

SITE LOCATION: WAYNE RECLAMATION & RECYCLING FACILITY - CITY OF COLUMBIA CITY, IN												
WELL NO.:				PROÆCT		42593						
FIELD BOOK NO.: ~/A			•				dy ste	ody Ra				
SAMPLING CREW:							_	45.50				
WELLHEAD INSPECTION:			·									
Evidence of Activities at Well:	No 🟒	Yes	Commen	t:								
Well Protector Condition:	Good 🗸_	Poor	Comment	:								
Insect/Rodent Intrusion:				t:								
Other:		N/A					_					
FIELD EQUIPMENT USED:					Date Calib	rated:						
Water Level Indicator: Solinst 🖌			r									
pH Meter: Hanna Orion Oakton V 4-25-06												
Conductivity Meter: YSI Oakton / Myron L												
Thermometer: YSI H	lanna	Oakton _	<del>/</del>			}						
Turbidity: Hach <u>J</u> HF Scientif Dissolved Oxygen: Corning No.		rming No. 1	)			<del></del>						
Other:	. 1 CC			•	<del></del>							
							-					
STATIC WATER LEVEL:	<b>.</b>	,										
Reference Point (RP) Elevation:	Top Casing		Top Protec			Well Stick						
Measured Level: 1st Time/Depth: 101Pm 17.3	_				70	Ave	rage .30					
Well Bottom: Measured Distance				1WV = 1	.30 .72454	E1911 =	8. 4227					
•				I W V e I	TETT	3WV -	016-1					
PURGING:			_	***		./						
Purging Device: Dedicated P	<b>՝սու</b> թ	Dedicated	Pump	Disposa	ble Bailer _	<u>v</u>						
Grundfos Pr Time Elapsed During Purging (min							C -11					
Time Diapsed During Language (mini-	3.) <b>Z</b> [2		Odnons Ac				13011 013					
				TIME (IN				<del>,</del>				
MEASUREMENTS	JOTPM_			119PM		<del></del>		<del></del>				
Amount of Water Removed (mls.)	I	1.0	3.0	5.0 7.19	7,0	8.0	9.0	<del> </del>				
pH (S.U.)	7.47		7.18	7.14	7.23	7.24	7.24	<u> </u>				
Conductivity (umhos/cm)	889	957	982		930	925	922	<del> </del>				
Temperature (°C)	4,4	4.8	5.0	5.3	5.3	109	5.4	<del> </del>				
Turbidity (NTU)	61	169	162	108 477	48 465		459					
TDS (ppm) Dissolved Oxygen (mg/l)	443	7/7	.489		765	460	-	<del> </del>				
Dissolved Oxygen (ingr)		L						1				
SAMPLING:												
Sampling Device: Dedicated I												
Grundfos P					<del></del>	<del></del>						
Time Sampling Began: 130Pm		Time Com										
Characteristics of Water:	Odor			ColorC	dear wi	siight B	rown lin	75				
QA/QC Sample Collected Duplica	Turbidity te / Repl	icate M	aurix Spike			eNone	_					
REMARKS:												

NMENTAL LABORATORY	
 BURGESS & NIPLE ENVIROR	
<b>BURGESS &amp;</b>	

113 80/2 9// 75 833 @6.07489 REMARKS PH Con 922 548 3,6 % on ce 7.31 7.24 7.24 7.53 Remarks: 5.4 3.4 Time 70H 57HIN 55019 B M 3 W 3 3 (5,0928) N 21/3014 CHAIN-OF-CUSTODY RECORD DIFSOID TW OOOI H052H (dos (EHN) **+ ○ + ∢ →** • 9 N SAMPLE DESCRIPTION Wayne Rectomation - Colombia City IN. Received by: Groundwoter DI Woler Time **7∞ P.m** 123/06 5 7 U × < 00 CLIENT NAME: 0020 į 130PM 150 PM 740 PM 1130 AM WdoEZ1 TIME stolen e. Bothy h. Relinquirhed by: Bardey h. 13/2/2 1/25/06 DATE PROJECT NO: 42593 SAMPLER: Equipment SAMPLE NO. Duplicate Blank Gm-4 G89-2 Gm-3 | cm - 1 

8533 5672 6819

Delivered to Lab UIA Fed-X

METHOD OF SHIPMENT:

5085 REED ROAD, COLUMBUS OH 43220/ TELEPHONE: (614)459-2050 FAX: (614)459-5398

BURCESS & NIPLE, LIMITĘD ENVIRONMENTAL LABORATORY

Relinquished by:

د اسر پخ

Received for Lab by:

Time

Time 090C

ATTACHMENT 2

LABORATORY REPORT



### Case Narrative

Page 1 of 2

Job Number: 06.07489 Date Reported: 05/08/06

Project ID: 42593 Wayne Reclamation Columbia City, IN

Enclosed with this case narrative is the analytical report in support of the Wayne Reclamation Project number 42593.

a). This report is issued to Burgess & Niple Engineers 05/15/06.

b). Analysis was conducted on a ground water sample.

Analyses conducted on the samples included the following:

Chloride EPA 325.3
COD Hach 8000
Nitrogen, Ammonia Direct EPA 350.1
Volatile Compounds SW 846 8260B
ICP Metals, Total SW 846 6010B

c). There were no deviations from intended strategy other than that indicated below.

No deviations observed.

- d). Laboratory batch numbers are found in the analytical data report for each analysis. Prep batch numbers refer to those parameters requiring preliminary preparation procedures and are used to define a set of samples that are prepped together. Run batch numbers refer to analytical analysis runs in which like samples are run together. There are QC samples for both prep batch control as well as run batch control.
- e). For this analytical job number there was a total of 7 samples.

7 samples were ground water.

- f). Refer to the cover page of the analytical report for the cross-reference of TestAmerica, Inc. sample number vs. Burgess & Niple sample descriptions.
- g). Samples were received on April 26, 2006 at 09:30 from FEDEX. The FEDEX tracking number was 853356726819. The cooler temperature on receipt was 3.6 degrees C, samples were received on ice. All samples were received intact in coolers with a completed Chain-of-Custody.



### **Case Narrative**

Page 2 of 2

Job Number: 06.07489 Date Reported: 05/08/2006

Project ID: 42593 Wayne Reclamation Columbia City, IN

h). All analytical holding times were observed for the analytes on this job.

i). No analytical difficulties/quality control checks were encountered with the exception of the following:

No exceptions.

- j). Dilutions used for the samples for this data are as follows:
  - 1). Samples 193921, 193923:

a). cis-1,2-Dichloroethene, 1,1,1-Trichloroethane, Trichloroethene - x100

Regina Smith - Ste. Marie

Project Manager

\*\*\*CORRECTED CASE NARRATIVE\*\*\*

3601 S. DIXIE DRIVE / DAYTON, OHIO 45439 / 937-294-6856 / 800-572-9839 / FAX: 937-294-7816



Michael Akins BURGESS & NIPLE LANDFILL 5085 Reed Rd. Columbus, OH 43220 Job Number: 06.07489
Report Date: 05/08/2006

Page: 1 of 22

Enclosed are the Analytical and Quality Control Reports for the following samples submitted to TestAmerica for analysis:

Project: 42593 Wayne Reclamation Columbia City, IN

Sample	Sample Description	Date	Date
<u>Number</u>		<u>Taken</u>	<u>Received</u>
193918	GM-1	04/25/2006	04/26/2006
193919	GM-2	04/25/2006	04/26/2006
193920	GM-3	04/25/2006	04/26/2006
193921	GM-4	04/25/2006	04/26/2006
193922	Equipment Blank	04/25/2006	04/26/2006
193923	GM-Duplicate	04/25/2006	04/26/2006
193924	Trip Blank	04/25/2006	04/26/2006

The Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TestAmerica certifies that the analytical results contained herein apply only to the specific samples analyzed. Reproduction of this report is permitted only in its entirety.

Enclosure

Project Management Approval

Dayton - 3601 South Dixie Drive, Dayton, OH 45439 937-294-6856/FAX:937-294-7816

Dundee (Chicago) - 1090 Rock Road Lane, Unit 11, Dundee, IL 60118 847-783-4960/FAX:847-783-4969

Indianapolis - 6964 Hillsdale Court, Indianapolis, IN 46250 317-842-4261/FAX:317-842-4286

Pontiac - 341 W. Walton Blvd, Pontiac, MI 48340 248-332-1940/FAX:248-332-5450



Michael Akins BURGESS & NIPLE LANDFILL 5085 Reed Rd. Columbus, OH 43220

Job Number: 06.07489 Report Date: 05/08/2006 Page: 2 of 22

SAMPLE NO. 193918

SAMPLE DESCRIPTION

GM-1

DATE/TIME TAKEN 04/25/2006 11:30

			Reporting		Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	-	Batch	Init.	ID	Reference
				•							
Chloride	50	mg/L	<10		04/27/2006			1367	dgr	DT	EPA 325.3
COD	24	mg/L	<10		04/27/2006	12:25		7565	kkh	DT	Hach 8000
Nitrogen, Ammonia Direct	0.71	mg/L	<0.05		05/02/2006			2152	adb	DT	EPA 350.1
Conductivity (On Site)	833	umhos/cm			04/25/2006			638	clt	CLT	Client Data
pH (On Site)	7.31	s.v.	<1.0		04/25/2006			1767	clt	CLT	EPA 150.1
Temperature (On Site)	6.7	Degree C			04/25/2006			609	clt	CLT	Client Data
furbidity (On Site)	113	UTU			04/25/2006			16	clt	CLT	Client Data
ICP TOTAL METALS	Complete		Complete		04/28/2006	10:35		5116	mrc	DT	SW 6010B
Sodium, ICP	21.3	mg/L	<1.0		04/28/2006	10:35	5429	5931	mrt	DT	SW 6010B
Metals Digestion, ICP	Complete		Complete		04/27/2006		5429		mja	DT	SW 3010A
VOLATILE COMPOUNDS - 8260 (AQ)											
Acetone	<20.0	ug/L	<20.0		05/05/2006			8945	prb	DT	SW 8260B
Acrylonitrile	<50.0	ug/L	<50.0		05/05/2006			8945	bip	DT	SW 8260B
Benzene	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
Bromochloromethane	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
Bromodichloromethane	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
Promoform	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
.!-Butanone (MEK)	<12.5	ug/L	<12.5		05/05/2006			8945	prb	DT	SW 8260B
Carbon disulfide	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
Carbon tetrachloride	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
hlorobenzene	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
Chloroethane	<5.0	ug/L	<5.0		05/05/2006			8945	prb	DΤ	SW 8260B
Chloroform	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
Thloromethane	<5.0	ug/L	<5.0		05/05/2006			8945	prb	DT	SW 8260B
ibromochloromethane	<1.0	ug/L	<1.0		05/05/2006			8945	brp	DT	SW 8260B
Dibromomethane	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
1,2-Dibromo-3-chloropropane	<5.0	ug/L	<5.0		05/05/2006			8945	prb	DT	SW 8260B
,2-Dibromoethane (EDB)	<5.0	ug/L	<5.0		05/05/2006	ı		8945	prb	DT	SW 8260B
,2-Dichlorobenzene	<1.0	ug/L	<1.0		05/05/2006			B945	prb	DT	SW 8260B
1,4-Dichlorobenzene	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8250B
rans-1,4-Dichloro-2-butene	<5.0	ug/∟	<5.0		05/05/2006	ı		8945	prb	D <b>T</b>	SW 8260B
,1-Dichloroethane	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
, 2-Dichloroethane	<1.G	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
1,1-Dichloroethene	<1.0	na\r	<1.0		05/05/2006			B945	prb	TC	SW 8260B
is-1,2-Dichloroethene	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
rans-1,2-Dichloroethene	<1.0	ug/L	<1.0		05/05/2006	i		8945	prb	DT	SW 8260B
1,2-Dichloropropane	<1.0	ug/L	<1.0		05/05/2006	ı		8945	prb	DT	SW 8260B



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SAMPLE NO.

SAMPLE DESCRIPTION

193918

GM-1

DATE/TIME TAKEN 04/25/2006 11:30

			Reportin	9	Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	ID	Reference
cis-1,3-Dichloropropene	<1.0	/7	<1.0		05 /05 /2006			8945	ргр	DT	SW 8260B
trans-1,3-Dichloropropene		ug/L			05/05/2006 05/05/2006				-	DT	SW 8260B
• •	<1.0	ug/L	<1.0					8945	prb		
Sthylbenzene	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
dexachlorobutadiene	<5.0	ug/L	<5.0		05/05/2006			8945	prb	DT	SW 8260B
2-Hexanone	<12.5	ug/L	<12.5		05/05/2006			8945	prb	DT	SW 8260B
Todomethane (Methyl Todide)	<5.0	ug/L	<5.0		05/05/2006			8945	prb	DT	SW 8260B
3romomethane	<5.0	ug/L	<5.0		05/05/2006			8945	prb	DT	SW 8260B
Methylene chloride	<5.0	ug/L	<5.0		05/05/2006			8945	prb .	. DT	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5	ug/L	<12.5		05/05/2006			8945	prb	DT	SW 8260B
Styrene	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
.,1,1,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
1,1,2,2-Tetrachloroethane	<1.0	ug/L	د1.0		05/05/2006			8945	prb	DΤ	SW 8260B
Tetrachloroethene	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DŢ	SW 8260B
Coluene	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
,1,1-Trichloroethane	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
1,1,2-Trichloroethane	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
Trichloroethene	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
richlorofluoromethane	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
.,2,3-Trichloropropane	<5.0	ug/L	<5.0		05/05/2006			8945	prb	DT	SW 8260B
Vinyl acetate	<5.0	ug/L	<5.0		05/05/2006			8945	prb	DT	SM 8260B
'inyl chloride	<1.0	ug/L	<1.0		05/05/2006			8945	prb	DT	SW 8260B
:ylenes, Total	<2.0	ug/L	<2.0		05/05/2006			8945	prb	DT	SW 8260B
Surr: 1,2-Dichloroethane-d4	113	ŧ	80-120		05/05/2006			8945	prb	DT	SW 8260B
Surr: Dibromofluoromethane	95	*	86-118		05/05/2006			8945	prb	DT	SW 8260B
Surr: Toluene-d8	96	*	88-110		05/05/2006			8945	prb	DT	SW 8260B
urr: 4-Bromofluorobenzene	94	4	86-115		05/05/2006			8945	prb	DT	SW 8260B



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SAMPLE NO. 193919 SAMPLE DESCRIPTION GM-2

DATE/TIME TAKEN 04/25/2006 12:30

			Reporting		Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	ФI	Reference
				-							
Chloride	13	mg/L	<5		04/27/2006			1367	dgr	DT	EPA 325.3
aon	14	mg/L	<10		04/27/2006	12:25		7565	kkh	DT	Hach 8000
litrogen, Ammonia Direct	0.98	mg/L	<0.05		05/02/2006			2152	ađo	DT	EPA 350.1
Conductivity (On Site)	863	umhos/cm			04/25/2006			638	clt	CLT	Client Data
рН (On Site)	7.24	s.u.	<1.0		04/25/2006			1767	clt	CLT	EPA 150.1
'emperature (On Site)	6.1	Degree C			04/25/2006			609	clt	CLT	Client Data
brbidity (On Site)	15	NTU			04/25/2006			16	clt	CLT	Client Data
CP TOTAL METALS	Complete		Complete		04/28/2006	10:49		5116	mrt	DT	SW 6010B
Sodium, ICP	10.7	mg/L	<1.0		04/28/2006	10:49	5429	5931	mrt	DT	SW 6010B
letals Digestion, ICP	Complete		Complete		04/27/2006		5429		mja	DT	ACCOE WS
VOLATILE COMPOUNDS - 8260 (AQ	)										
Acetone	<20.0	ug/L	<20.0		05/05/2006			8944	prb	DT	SW 8260B
crylonitrile	<50.0	ug/L	< 50.0		05/05/2006			8944	prb	DT	SW 8260B
enzene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Bromochloromethane	<1.0	ug/L	<1.0		05/05/2006			B944	prb	DT	SW 8260B
Bromodichloromethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
romoform	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Butanone (MEK)	<12.5	ug/L	<12.5		05/05/2006			8944	prb	DT	SW 8260B
Carbon disulfide	1.5	ug/L	<1.0		05/05/2006			8944	prb	PT	SW 8260B
`arbon tetrachloride	<1.D	ug/L	<1.0		05/05/2006	•		8944	brp	DI	SM 8360B
'hlorobenzene	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
Chloroethane	<5.0	ug/L	<5.0		05/05/2006	i		8944	prb	DT	SW 8260B
Chloroform	<1.0	na\r	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
:hloromethane	<5.0	ug/L	<5.0		05/05/2006	;		8944	prb	DT	SW 8260B
ibromochloromethane	< 1 . 0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Dibromomethane	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
1,2-Dibromo-3-chloropropane	<5.D	ug/L	<5.0		05/05/2006			8914	prb	DT	SW 8260B
.,2-Dibromoethane (EDB)	<5.0	ug/L	<5.0		05/05/2006	;		8944	prb	DT	SW 8260B
.2-Dichlorobenzene	<1.0	ug/L	<1.0		05/05/2006	,		B944	brp	DT	SW 8260B
1,4-Dichlorobenzene	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
rans-1,4-Dichloro-2-butene	<5.Q	ug/L	<5.0		05/05/2006	i		8944	prb	DT	SW 8260B
, 1-Dichloroethane	<1.0	vg/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
.,2-Dichloroethane	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
1,1-Dichloroethene	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
:is-1,2-Dichloroethene	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
rans-1,2-Dichloroethene	<1.0	ug/L	<1.0		05/05/2006	,		8944	prb	DT	SW 8260B
1,2-Dichloropropane	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B



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SAMPLE NO.

SAMPLE DESCRIPTION

193919 GM-2

DATE/TIME TAKEN 04/25/2006 12:30

			Reporting		Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	ID	Reference
cis-1,3-Dichloropropene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
rans-1,3-Dichloropropene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
thylbenzene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
exachlorobutadiene	<5.0	ug/L	∢5.0		05/05/2006			8944	prb	DT	SW 8260B
2-Hexanone	<12.5	ug/L	<12.5		05/05/2006			8944	prb	DT	SW 8260B
odomethane (Methyl Iodide)	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
romomethane	<5.0	ug/L	د5.0		05/05/2006			8944	prb	DT	SW 8260B
Methylene chloride	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5	v9/L	<12.5		05/05/2006			8944	prb	OT	SM 8360B
tyrene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
,1,1,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/05/2006			B944	prb	D <b>T</b>	SW 8260B
1,1,2,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Tetrachloroethene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	D <b>T</b>	SW 8260B
oluene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
,1,1-Trichloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
1,1,2-Trichloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
"richloroethene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
'richlorofluoromethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
1,2,3-Trichloropropane	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
Vinyl acetate	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
inyl chloride	<1.0	ug/L	<1.0		<b>0</b> 5/05/2006			8944	prb	DT	SW 8260B
ylenes, Total	<2.0	ug/L	<2.0		05/05/2006			8944	prb	DT	SW 8260B
Surr: 1,2-Dichloroethane-d4	108		80-120		05/05/2006			8944	prb	DT	SW 8260B
Surr: Dibromofluoromethane	94	1	86-118		05/05/2006			8944	prb	DT	SW 8260B
urr: Toluene-dB	99	•	88-110		05/05/2006			8944	prb	DT	SW 8260B
urr: 4-Bromofluorobenzene	94	•	86-115		05/05/2006			8944	prb	TO	SW 8260B



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SAMPLE DESCRIPTION

**GM-**3

DATE/TIME TAKEN 04/25/2006 14:40

			Reporting		Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	ID	Reference
Chloride	35	mg/L	<5		04/27/2006			1367	dgr	DT	EPA 325.3
COD	109	mg/L	<10		04/27/2006	12:35		7566	kkb	DT	Hach 8000
Jitrogen, Ammonia Direct	0.46	mg/Ն	<0.05		05/02/2006			2152	adb	DT	EPA 350.1
Conductivity (On Site)	548	umbos/cm			04/25/2006			638	clt	CLT	Client Data
pH (On Site)	7.53	s.u.	<1.0		04/25/2006			1767	clt	CLT	EPA 150.1
Temperature (On Site)	3.4	Degree C			04/25/2006			609	clt	CLT	Client Data
Aurbidity (On Site)	>1000	NTU			04/25/2006			16	clt	CLT	Client Data
CP TOTAL METALS	Complete		Complete		04/28/2006	10:53		5116	mrt	DT	SW 6010B
Sodium, ICP	22.3	mg/L	<1.0		04/28/2006	10:53	5429	5931	mrt	DT	SW 6010B
letals Digestion, ICP	Complete		Complete		04/27/2006		5429		mja	DT	SW 3010A
VOLATILE COMPOUNDS - 8260 (AQ)	1										
Acetone	<20.0	ug/L	<20.0		05/05/2006			8944	prb	DΤ	SW 8260B
crylonitrile	<50.0	ug/L	<50.0		05/05/2006			8944	brp	DT.	SW 82609
enzene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Bromochloromethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Bromodichloromethane	<1.0	ug/L	<1.0		05/05/2006			8944	brp	DI	SW 8260B
romoform	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
-Bucanone (MEK)	<12.5	ug/L	<12.5		05/05/2006			8944	prb	DT	SW 8260B
Carbon disulfide	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Carbon tetrachloride	<1.0	ug/L	<1.0		05/05/2006			8914	prb	DT	SW 82609
hlorobenzene	<1.0	ug/L	<1.0		05/05/2006	ı		8944	prb	DT	SW 8260B
Lhloroethane	<5.0	ug/L	<5.0		05/05/2006	1		8944	prb	DT	SW 8260B
Chloroform	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
hloromethane	<s.0< td=""><td>ug/L</td><td>&lt;5.0</td><td></td><td>05/05/2006</td><td>•</td><td></td><td>8944</td><td>prb</td><td>DT</td><td>SW 8260B</td></s.0<>	ug/L	<5.0		05/05/2006	•		8944	prb	DT	SW 8260B
ibromochloromethane	<1.0	ug/L	<1.0		05/05/2006	ı		B944	prb	DT	SW 8260B
Dibromomethane	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
1,2-Dibromo-3-chloropropane	<5.0	ug/L	<5.0		05/05/2006	i		8944	prb	DT	SW 8260B
,2-Dibromoethane (EDB)	<5.0	ug/L	<5.0		05/05/2006	;		8944	prb	DT	SW 8260B
,2-Dichlorobenzene	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
1,4-Dichlorobenzene	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
trans-1,4-Dichloro-2-butene	<5.0	ug/L	<5.0		05/05/2006	;		8944	prb	DT	SW 8260B
,1-Dichloroethane	<1.0	ug/L	<1.0		05/05/2006	5		8944	prb	DT	SW 8260B
,2-Dichloroethane	<1.0	ug/L	<1.0		05/05/2006	5		8944	prb	DT	SW 8260B
1,1-Dichloroethene	<1.0	ug/L	<1 0		05/05/2006	5		8944	prb	DT	SW 8260B
~is-1,2-Dichloroethene	34.4	ug/L	<1.0		05/05/2006	5		8944	brp	DT	SN 8260B
rans-1,2-Dichloroethene	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
.,2-Dichloropropane	<1.0	ug/L	<1.0		05/05/2006	5		8944	prb	DT	SW 8260B



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**SAMPLE NO.** 193920

SAMPLE DESCRIPTION

GM-3

**DATE/TIME TAKEN** 04/25/2006 14:40

			Reportin	g	Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	ID	Reference
cis-1,3-Dichloropropene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
trans-1,3-Dichloropropene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Ethylbenzene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Hexachlorobutadiene	<b>45.0</b>	ug/L	<5 0		05/05/2006			8944	bip	DT	SW 8260B
2-Hexanone	<12.5	ug/L	<12.5		05/05/2006			8944	prb	DT	SW 8260B
Todomethane (Methyl Iodide)	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
3romomethane	<5.0	ug/L	< 5.0		05/05/2006			8944	prb	DT	SW 8260B
Aethylene chloride	45.0.	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5	ug/L	<12.5		05/05/2006			8944	prb	DT	SW 8260B
Styrene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DΤ	SW 8260B
1,1,1,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
1,1,2,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
Tetrachloroethene	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
Coluene	<1.0	սց/Ն	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
1,1,1-Trichloroethane	<1.0	ug/L	<1.0		05/05/2006	<b>.</b>		8944	prb	DT	SW 8260B
1,1,2-Trichloroethane	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
Trichloroethene	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
!richlorofluoromethane	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
.,2,3-Trichloropropane	<5.0	ug/L	<5.0		05/05/2006	5		8944	prb	DT	SW 8260B
Vinyl acetate	<5.0	ug/L	<5.0		05/05/2006	;		8944	prb	DT	SW 8260B
Vinyl chloride	12.6	ug/L	<1.0		05/05/2006	<b>i</b>		8944	prb	DT	SW 8260B
(ylenes, Total	<2.0	ug/L	<2.0		05/05/2006	;		8944	prb	DT	SW 8260B
Jurr: 1,2-Dichloroethane-d4	110	1	80-120		05/05/2006	<b>.</b>		8944	prb	DT	SW 8260B
Surr: Dibromofluoromethane	94		86-118		05/05/2006	i		8944	prb	DT	SW 8260B
urr: Toluene-d8	97		88-110		05/05/2006	<b>i</b>		8944	prb	DT	SW 82609
urr: 4-Bromofluorobenzene	97	1	86-115		05/05/2006			8944	prb	DT	SW 8260B



Michael Akins BURGESS & NIPLE LANDFILL 5085 Reed Rd. Columbus, OH 43220

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SAMPLE NO. 193921

SAMPLE DESCRIPTION

GM-4

**DATE/TIME TAKEN** 04/25/2006 13:30

			Reporting		Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	1D	Reference
Chloride	<5	mg/L	<5		04/27/2006			1367	dgr	DT	EPA 325.3
COD	24	mg/l	<10		04/27/2006	12:25		7565	kkh	DT	Hach 8000
Nitrogen, Ammonia Direct	0.37	mg/L	<0.05		05/02/2006			2152	aďb	DT	EPA 350.1
Conductivity (On Site)	922	napos/ca			04/25/2006			638	clt	CLT	Client Data
pH (On Site)	7.24	<b>6.</b> U.	<1.0		04/25/2006			1767	c)t	CLT	EPA 150.1
Temperature (On Site)	5.4	Degree C			04/25/2006			609	clt	CLT	Client Data
Turbidity (On Site)	116	UIU			04/25/2006			16	clt	CLT	Client Data
1CP TOTAL METALS	Complete		Complete		04/28/2006	10:58		5116	mst	DT	SW 6010B
Sodium, ICP	13.7	tag/L	<1.0		04/28/2006	10:5B	5429	5931	mrt	DŢ	SW 6010B
Metals Digestion, ICP	Complete		Complete		04/27/2006		5429		mja	DT	A010E WE
VOLATILE COMPOUNDS - 8260 (AQ)											
Acetone	<20.0	ug/L	<20.0		05/05/2006			8944	prb	ΤŒ	SW 8260B
Acrylonitrile	<50.0	ug/L	<50.0		05/05/2006			8944	brp	DI	SW 6260B
Benzene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Bromochloromethane	<1.0	ug/L	<1.0		05/05/2006			8944	brp	DT	SW 8260B
Bromodichloromethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Bromoform	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
2-Butanone (MEK)	<12.5	ug/L	<12.5		05/05/2006			8944	prb	DT	SW 8260B
Carbon disulfide	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	EM 8260B
Carbon tetrachloride	<1.0	սց/Ն	<1.0		05/05/2006	;		8944	brp	DT	SM 8360B
Chlorobenzene	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
Chloroethane	<5.0	ug/L	<5.0		05/05/2006	;		8944	prb	D7	SM 8360B
Chloroform	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
Chloromethane	<5.0	ug/L	<5.0		05/05/2006	i		8944	prb	DT	2M 6560B
Dibromochloromethane	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SN 8260B
Dibromomethane	<1.0	ug/L	<1.0		05/05/2006	i		8944	brp	DT	SW #260B
1,2-Dibromo-3-chloropropane	<5.0	սց/և	<5.0		05/05/2006	i		8944	brp	DT	SW \$260B
1,2-Dibromoethane (EDB)	<5.0	ug/L	<5.0		05/05/2006	;		8944	prb	DT	SW 8260B
1,2-Dichlorobensene	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
1,4-Dichlorobenzene	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	S# 8260B
trans-1,4-Dichloro-2-butene	<5.0	ug/L	<5.0		05/05/2006	;		8944	prb	DT	SW 8260B
1,1-Dichloroethane	20.6	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
1,2-Dichloroethane	<1.0	ug/L	<1.0		05/05/2006	5		8944	prb	DT	SW 8260B
1,1-Dichloroethene	4.2	ug/L	<1.0		05/05/2006	5		8944	prb	DT	SW 8260B
cis-1,2-Dichloroethene	173	ug/L	<100	x100	05/05/2006	5		8944	prb	DT	SW 8260B
trans-1,2-Dichloroethene	11.6	ug/L	<1.0		05/05/2006	5		8944	prb	DT	EW 8260B
1,2-Dichloropropane	<1.0	ug/L	<1.0		05/05/2006	5		8944	prb	DT	SW 8260B

x - Sample was diluted. Number indicates dilution factor.



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SAMPLE NO. 193921

SAMPLE DESCRIPTION GM-4

DATE/TIME TAKEN 04/25/2006 13:30

			Reporting	3	Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	ID	Reference
cis-1,3-Dichloropropene	<1.0	uq/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
trans-1,3-Dichloropropene	<1.0	ug/L	<1.0		05/05/2006			8944	•	DT	SW 8260B
Ethylbenzene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DI	SW 8260B
Hexachlorobutadiene	<5.0	ug/L	<5.0		05/05/2006				prb	DT	SW 8260B
2-Hexanone		•	<12.5		05/05/2006				prb		
	<12.5	ug/L						8944	prb	DT	EW 8260B
Iodomethane (Methyl Iodide)	<5.0	υg/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
Bromomethane	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SM 8360B
Methylene chloride	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
4-Methyl-2-pentanone (MIBK)	<12.5	ug/L	<12.5		05/05/2006			8944	prb	DT	SM \$260B
Styrene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	EM 8260B
1,1,1,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	Dī	SW 8260B
1,1,2,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	brp	DT	SW 8260B
Tetrachloroethene	<1.0	ug/L	<1.0		05/05/2006			B944	prb	DT	SM 8260B
Toluene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
1,1,1-Trichloroethane	229	ug/L	<100	X100	05/05/2006			8944	prb	DT	SW 8260B
1,1,2-Trichloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SM 8260B
Trichloroethene	980	ug/L	<100	×100	05/05/2006			8944	prb	DT	SW 8260B
Trichlorofluoromethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW \$260B
1,2,3-Trichloropropane	<5.D	ug/L	<5.0		05/05/2006	:		8944	pzb	DT	SW 8260B
Vinyl acetate	<5.0	ug/L	<5.0		05/05/2006	;		8944	prb	DT	SW 8260B
Vinyl chloride	11.2	ug/L	<1.0		05/05/2006	;		8944	prb	DI	SW #260B
Tylenes, Total	<2.0	ug/L	<2.0		05/05/2006	;		8944	prb	DT	SW 82609
Surr: 1,2-Dichloroethane-d4	111	1	80-120		05/05/2006	;		8944	prb	DT.	SW 8260B
Surr: Dibromofluoromethane	97	*	86-118		05/05/2006			8944	prb	DT	SW 8260B
Surr: Toluene-d8	96	•	88-110		05/05/2006			B944	prb	DT	SW 8260B
Surr: 4-Bromofluorobenzene	95		86-115		05/05/2006			B944	prb	DT	SW 8260B

x - Sample was diluted. Number indicates dilution factor.



Michael Akins BURGESS & NIPLE LANDFILL 5085 Reed Rd. Columbus, OH 43220

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SAMPLE NO. 193922

SAMPLE DESCRIPTION Equipment Blank

DATE/TIME TAKEN 04/25/2006 13:50

			Reporting		Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init	ID	Reference
Chloride	<5	mg/L	<5		04/27/2006			1367	dgr	DT	EPA 325.3
COD	<10	mg/L	<10		04/27/2006	12:25		7565	kkh	DT	Hach 8000
Nitrogen, Ammonia Direct	<0.05	mg/L	<0.05		05/02/2006			2152	adb	DT	EPA 350.1
ICP TOTAL METALS	Complete		Complete		04/28/2006	11:03		5116	mrt	DT	SW 6010B
Sodium, ICP	<1.0	mg/L	<1.0		04/28/2006	11:03	5429	5931	mrt	DT	SW 6010B
Metals Digestion, ICP	Complete		Complete		04/27/2006		5429		mja	DT	SW 3010A
VOLATILE COMPOUNDS - 8260 (AQ)											
Acetone	<20.0	ug/L	<20.0		05/05/2006			8944	prb	DΤ	SW 8260B
Acrylonitrile	<50.0	ug/L	<50.0		05/05/2006			8944	prb	DΤ	SW 8260B
3enzene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Bromochloromethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Bromodichloromethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
3romoform	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
?-Butanone (MEK)	<12.5	ug/L	<12.5		05/05/2006			8944	prb	DT	SW 8260B
Carbon disulfide	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Carbon tetrachloride	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Thlorobenzene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Thloroethane	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
Chloroform	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Thloromethane	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
Dibromochloromethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Dibromomethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
1,2-Dibromo-3-chloropropane	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
,2-Dibromoethane (EDB)	<5.0	ug/L	<5.0		05/05/2006			6944	prb	DT	SW 8260B
., 2-Dichlorobenzene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
1.4-Dichlorobenzene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DΤ	SW 8260B
trans-1,4-Dichloro-2-butene	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
.,1-Dichloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
.,2-Dichloroethane	<1 0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
1,1-Dichloroethene	<1.0	ng/r	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
cis-1,2-Dichloroethene	<1.0	սց/ե	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
rans-1,2-Dichloroethene	<1.0	19/L	<1.0		05/05/2006			8944	bip	TO	SW 8260B
, 2 Dichloropropane	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DΥ	SW 8260B
cis-1,3-Dichloropropene	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
:rans-1,3-Dichloropropene	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
:thylbenzene	<1.0	ug/L	<1.0		05/05/2006	5		8944	prb	DT	SW 8260B
dexachlorobutadiene	<5.0	ug/L	<5.0		05/05/2006	;		8944	prb	DT	SW 8260B



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SAMPLE NO. 193922

SAMPLE DESCRIPTION Equipment Blank

DATE/TIME TAKEN 04/25/2006 13:50

			Reportin	g	Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	ID	Reference
2-Hexanone	<12.5	ug/L	<12.5		05/05/2006			8944	prb	DT	SW 8260B
Todomethane (Methyl Iodide)	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
romomethane	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
Methylene chloride	<5.0	ug/L	<5.0		05/05/2006			B944	prb	DT	SW 8260B
4-Methyl-2-pentanone (HIBK)	<12.5	ug/L	<12.5		05/05/2006			8944	prb	DТ	SW 8260B
tyrene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
,1,1,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
1,1,2,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Tetrachloroethene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
'oluene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
,1,1-Trichloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
1,1,2-Trichloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Trichloroethene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
'richlorofluoromethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
,2,3-Trichloropropane	<5.0	սց/Ն	<5.0		05/05/2006			8944	prb	DT	SW 8260B
Vinyl acetate	<5.0	ug/L	<5.0		05/05/2006	;		8944	prb	DT	SM 8260B
Winyl chloride	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
ylenes, Total	<2.0	ug/L	<2.0		05/05/2006	i		8944	prb	D <b>T</b>	SW 8260B
_urr: 1,2-Dichloroethane-d4	110	*	80-120		05/05/2006	;		8944	prb	DT	SW 8260B
Surr: Dibromofluoromethane	94	¥	86-118		05/05/2006			8944	prb	DT	SW 8260B
urr: Toluene-d8	98	*	88-110		05/05/2006	;		8944	prb	DT	SW 8260B
urr: 4-Bromofluorobenzene	98	•	86-115		05/05/2006	;		8944	prb	DT	S# 8260B



Michael Akins BURGESS & NIPLE LANDFILL 5085 Reed Rd. Columbus, OH 43220

Job Number: 06.07489 Report Date: 06/21/2006 Page: 12 of 22

SAMPLE NO. 193923

SAMPLE DESCRIPTION GM-Duplicate

DATE/TIME TAKEN 04/25/2006

			Reporting	ī	Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	Œ	Reference
Chloride	<5	mg/L	<5		04/27/2006			1367	dgr	DT	EPA 325.3
COD	20	mg/L	<10		04/27/2006	12:25		7565	kkh	DT	Hach 8000
Nitrogen, Ammonia Direct	0.38	mg/L	<0.05		05/02/2006			2152	adb	DT	EPA 350.1
ICP TOTAL METALS	Complete	1	Complete		04/28/2006	11:07		5116	met	DT	SW 6010B
Sodium, ICP	14.6	mg/L	<1.0		04/28/2006	11:07	5429	5931	mrt	DT	SW 6010B
Metals Digestion, ICP	Complete	•	Complete		04/27/2006		5429		wja	DT	SW 3010A
VOLATILE COMPOUNDS - 8260 (AQ)											
Acetone	<20.0	ug/L	<30.0		05/05/2006			8944	prb	DT	SW 8260B
Acrylonitrile	<50.0	ug/L	<50.0		05/05/2006			8944	brp	DT	SW 8260B
Benzene	<1.0	ug/L	<1.D		05/05/2006	i		8944	prb	DT	EW 8260B
Bromochloromethane	<1.0	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
Bromodichloromethane	<1.0	ug/L	<1.0		05/05/2006	;		8944	prb	DT	SW 8260B
Bromoform	<1.0	ug/L	<1.0		05/05/2006	:		8944	prb	DT	SW 8260B
2-Butanone (MEK)	<12.5	ug/L	<12.5		05/05/2006	;		8944	prb	DT	BM 8560B
Carbon disulfide	<1.0	ug/L	<1.0		05/05/2006	;		8944	brp	DT	SW 8260B
Carbon tetrachloride	<1.0	ug/l	<1.0		05/05/2006	5		8944	brp	DT	SM 8260B
Chlorobenzene	<1.0	ug/L	<1.0		05/05/2006	5		8944	prb	DT	SM 8360B
Chloroethane	<5.0	ug/L	<5.0		05/05/2006	5		8944	prb	DT	SW 8260B
Chloroform	<1.0	ug/L	<1.0		05/05/2006	5		8944	prb	DT	SW 8260B
Chloromethane	<5.0	ug/L	<5.D		05/05/2006	5		8944	prb	DT	SW 8260B
Dibromochloromethane	<1.0	ug/L	<1.0		05/05/2006	5		8944	prb	DT	SW 8260B
Dibromomethane	<1.0	ug/L	<1.0		05/05/2006	5		8944	prb	DT	SW 8260B
1,2-Dibromo-3-chloropropane	<5.0	ug/L	<5.0		05/05/2006	5		8944	prb	DŢ	SW 6260B
1,2-Dibromoethane (EDB)	<5.0	սց/Ն	<5.0		05/05/2006	6		8944	brp	DT	SW 8260B
1,2-Dichlorobenzene	<1.0	ug/L	<1.0		05/05/200	6		8944	prb	DT	SW 8260B
1,4-Dichlorobenzenz	<1.0	սց/Ն	<1.0		05/05/200	5		8944	prb	DT	SW 8260B
trans-1,4-Dichloro-2-butene	<5.0	ug/L	<5.0		05/05/200	6		8944	prb	DΤ	SW 8260B
1,1-Dichloroethane	22.4	աց/Ն	<1.0		05/05/2001	6		8944	prb	DI	SW \$260B
1,2-Dichloroethane	<1.0	ug/L	<1.0		05/05/200	6		8944	prb	DT	SW 8260B
1,1-Dichloroethene	4.4	ug/L	<1.0		05/05/200	6		8944	brp	DI	SM 8260B
cis-1,2-Dichloroethene	175	ug/L	<100	x100	05/05/200	6		8944	prb	DT	SW 8260B
trans-1,2-Dichloroethene	12.3	ug/L	<1.0		05/05/200	6		8944	prb	DT	SW \$260B
1,2-Dichloropropane	c1.0	ug/L	<1.0		05/05/200	6		8944	prb	DT	SW 8260B
cis-1,3-Dichloropropene	<1.0	ug/L	<1.0		05/05/200	6		8944	prb	DT	SW 8260B
trans-1,3-Dichloropropene	<1.0	սց/և	<1.0		05/05/200	6		8944	prb	DT	SW 8260B
Ethylbenzene	<1.0	սց/Ն	<1.0		05/05/200	6		8944	prb	DT	SW \$260B
Hexachlorobutadiene	<5.0	ug/L	<5.0		05/05/200	6		8944	prb	DT	SN 8260B
		-							-		

x - Sample was diluted. Number indicates dilution factor.



Michael Akins BURGESS & NIPLE LANDFILL 5085 Reed Rd. Columbus, OH 43220

Job Number: 06.07489 Report Date: 06/21/2006 Page: 13 of 22

SAMPLE NO. 193923

SAMPLE DESCRIPTION

GM-Duplicate

DATE/TIME TAKEN 04/25/2006

			Reporting		Rwn	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	ID	Reference
2-Rexanone	<12.5	υg/L	<12.5		05/05/2006			8944	DID	DT	SW 8260B
Iodomethane (Methyl lodide)	<5.0	vg/L	<5.0		05/05/2006			8944	prb	DT	SW 8260B
Bromomethane	<5.0	υg/L	<5.0		05/05/2006			8944	prb	DT	SW #260B
Methylene chloride	<5.0	ug/L	<5.0		05/05/2006			8944	-	DI	SM #260B
4-Methyl-2-pentanone (MIBK)	<12.5	ug/L	<12.5		05/05/2006			8944	prb.	DT	SN 8260B
Styrene	<1.0	υg/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
1,1,1,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/05/2006			B944	prb	DT	SW 4260B
1,1,2,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Tetrachloroethens	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Toluene	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
1,1,1-Trichloroethane	237	սց/Ն	<100	x100	05/05/2006			8944	prb	DT	SW \$260B
1,1,2-Trichloroethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
Trichloroethene	1,030	ug/L	<100	×100	05/05/2006			8944	prb	DT	SW 8260B
Trichlorofluoromethane	<1.0	ug/L	<1.0		05/05/2006			8944	prb	DT	SW 8260B
1,2,3-Trichloropropane	<5.0	ug/L	<5.0		05/05/2006			8944	prb	DΤ	SW 8260B
Vinyl acetate	<5.0	սց/Ն	<5.0		05/05/2006	i		8944	prb	DT	SW 8260B
Vinyl chloride	12.1	ug/L	<1.0		05/05/2006	i		8944	prb	DT	SW 8260B
Xylenes, Total	<2.0	ug/L	<2.0		05/05/2006	;		8944	prb	DT	SW 8260B
Surr: 1,2-Dichloroethane-d4	112	*	80-120		05/05/2006			8944	prb	DT	SW 8260B
Surr: Dibromofluoromethane	96	1	86-118		05/05/2006	;		8944	bxp	DT	SM 8260B
Surr: Toluene-d8	98	•	88-110		05/05/2006	;		8944	prb	DT	SW 8260B
Surr: 4-Bromofluorobenzene	95	*	86-115		05/05/2006	;		8944	prb	DI	SW 8260B

x - Sample was diluted. Number indicates dilution factor.



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SAMPLE NO. 193924

SAMPLE DESCRIPTION Trip Blank

DATE/TIME TAKEN 04/25/2006

			Reporting		Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	ID	Reference
VOLATILE COMPOUNDS - 8260 (AQ)											
Acetone	<20.0	ug/L	<20.0		05/03/2006			8935	prb	DT	SW 8260B
crylonitrile	<500	n∂\r	<50.0		05/03/2006			8935	prb	DT.	SW 8260B
jenzene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
Bromochloromethane	<1.0	ug/L	<1.0		05/03/2006			8935	prb	D <b>T</b>	SW 8260B
?romodichloromethane	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
iromoform	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
2~Butanone (MEK)	<12.5	ug/L	<12.5		05/03/2006			B935	prb	DT	SW 8260B
Carbon disulfide	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 82608
arbon tetrachloride	<1.0	na\r	<1.0		05/03/2006			8935	prb	DI	SW 8260B
.hlorobenzene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
Chloroethane	<5.0	na\r	<5.0		05/03/2006			8935	prb	DT	SW 8260B
Chloroform	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
Chloromethane	<5.0	ug/L	<5.0		05/03/2006			8935	prb	DT	SW 8260B
Dibromochloromethane	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
Dibromomethane	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
`.2-Dibromo-3-chloropropane	<5.0	ug/L	<5.0		05/03/2006			8935	prb	DT	SW 8260B
,2-Dibromoethane (EDB)	<5.0	ug/L	<5.0		05/03/2006			8935	prb	DT	SW 8260B
,2-Dichloropenzene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
1,4-Dichlorobenzene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
"rans-1,4-Dichloro-2-butene	<5.0	ug/L	<5.0		05/03/2006			8935	prb	DT	SW 8260B
.l-Dichloroethane	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
.,2-Dichloroethane	<1.0	ug/L	<1.0		05/03/2006			B935	prb	DT	SW 8260B
1,1-Dichlorosthene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
is-1,2-Dichloroethene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
rans-1,2-Dichloroethene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
1,2-Dichloropropane	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
cis-1,3-Dichloropropene	<1.0	ug/L	<1.0		05/03/2006	;		8935	prb	DT	SW 8260B
rans-1,3-Dichloropropene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
thylbenzene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 82608
Hexachlorobutadiene	<5.0	ug/L	<5.0		05/03/2006	;		8935	prb	DT	SW 8260B
?-Нехаполе	<12.5	ug/L	<12.5		05/03/2006	;		8935	prb	DT	5W 8260B
odomethane (Methyl Iodide)	<5.0	ug/L	<5.0		05/03/2006	;		8935	prb	DT	SW 8260B
romomethane	<5.0	ug/L	<5.0		05/03/2006	i		8935	prb	DΤ	SW 8260B
Methylene chloride	<5.0	ug/L	<5.0		05/03/2006	i		8935	prb	DT	SW 8260B
-Methyl-2-pentanone (MIBK)	<12.5	ug/L	<12.5		05/03/2006	i		8935	prb	DT	SW 8260B
tyrene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
1,1,1,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
		-							-		



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SAMPLE NO. 193924

SAMPLE DESCRIPTION

Trip Blank

DATE/TIME TAKEN 04/25/2006

			Reportin	g	Run	Run	Prep	Run	Anal.	Lab	Method
	Result	Units	Limit	Flag	Date	Time	Batch	Batch	Init.	ID	Reference
1,1,2,2-Tetrachloroethane	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
Tetrachloroethene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
Toluene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
1,1,1-Trichloroethane	<1.0	ug/և	<1.0		05/03/2006			8935	prb	DT	SW 8260B
1,1,2 Trichloroethane	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DΤ	SW 8260B
Trichloroethene	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
Frichlorofluoromethane	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
1,2,3-Trichloropropane	<5.0	ug/L	<5.0		05/03/2006			8935	prb	DT	SW 8260B
Vinyl acetate	<5.0	ug/L	<5.0		05/03/2006			8935	prb	DT	SW 8260B
/inyl chloride	<1.0	ug/L	<1.0		05/03/2006			8935	prb	DT	SW 8260B
ylenes, Total	<2.0	ug/L	<2.0		05/03/2006			8935	prb	DT	SW 8260B
Surr: 1,2-Dichloroethane-d4	107	*	80-120		05/03/2006			8935	prb	DT	SW 8260B
Surr: Dibromofluoromethane	92	1	86-118		05/03/2006			8935	prb	DT	SW 8260B
urr: Toluene-d8	98	1	88-110		05/03/2006			8935	prb	DT	SW 8260B
Gurr: 4-Bromofluorobenzene	95	•	86-115		05/03/2006			8935	prb	DT	SW 8260B



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Job Number: 06.07489 Report Date: 05/08/2006 Page: 16 of 22

	Prep	Run				
	Batch	Batch	Blank		Date	Date
Analyte	Number	Number	Result	Units	Prepped	Analyzed
COD		7565	<10	mg/L		04/27/2006
COD		7566	<10	mg/L		04/27/2006
COD		7566	<10	mg/L		04/27/2006
Nitrogen, Ammonia Direct		2152	< 0.05	mg/L		05/02/2006
Sodium, ICP	5429	5931	<1.0	mg/L	04/27/2006	04/28/2006
Sodium, ICP		5931	<1.0	mg/L		04/28/2006
VOLATILE COMPOUNDS - 8260 (AQ)						
Acetone		8935	<20.0	ug/L		05/03/2006
Acrylonitrile		8935	<50.0	ug/L		05/03/2006
Benzene		8935	<1.0	ug/L		05/03/2006
Bromochloromethane		8935	<1.0	ug/L		05/03/2006
Bromodichloromethane		8935	<1.0	ug/L		05/03/2006
Bromoform		8935	<1.0	ug/L		05/03/2006
2-Butanone (MEK)		B935	<12.5	ug/L		05/03/2006
Carbon disulfide		8935	<1.0	ug/L		05/03/2006
Carbon tetrachloride		8935	<1.0	ug/L		05/03/2006
Chlorobenzene		8935	<1.0	ug/L		05/03/2006
Chloroethane		8935	<5.0	ug/L		05/03/2006
Chloroform		8935	<1.0	ug/L		05/03/2006
Chloromethane		8935	<5.0	ug/L		05/03/2006
Dibromochloromethane		8935	<1.0	ug/L		05/03/2006
Dibromomethane		8935	<1.0	ug/L		05/03/2006
1,2-Dibromo-3-chloropropane		8935	<5.0	ug/L		05/03/2006
1,2-Dibromoethane (EDB)		8935	<5.0	ug/L		05/03/2006
1,2-Dichlorobenzene		8935	<1.0	ug/L		05/03/2006
1,4-Dichlorobenzene		8935	<1.0	ug/L		05/03/2006
trans-1,4-Dichloro-2-butene		8935	<5.0	ug/L		05/03/2006
1,1-Dichloroethane		8935	<1.0	ug/L		05/03/2006
1,2-Dichloroethane		8935	<1.0	ug/L		05/03/2006
1,1-Dichloroethene		8935	<1.0	ug/L		05/03/2006
cis-1,2-Dichloroethene		8935	<1.0	ug/L		05/03/2006
trans-1,2-Dichloroethene		8935	<1.0	ug/L		05/03/2006
1,2-Dichloropropane		8935	<1.0	ug/L		05/03/2006
cis-1,3-Dichloropropene		8935	<1.0	ug/L		05/03/2006
trans-1,3-Dichloropropene		8935	<1.0	ug/L		05/03/2006
Ethylbenzene		8935	<1.0	ug/L		05/03/2006
Hexachlorobutadiene		8935	<5.0	սց/Լ		05/03/2006
2-Hexanone		8935	<12.5	ug/L		05/03/2006
Iodomethane (Methyl Iodide)		8935	<5.0	ug/L		05/03/2006
				-3/ <del>-</del>		,,



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Job Number: 06.07489 Report Date: 05/08/2006 Page: 17 of 22

	Prep	Run				
	Batch	Batch	Blank		Date	Date
Analyte	Number	Number	Result	Units	Prepped	Analyzed
Bromomethane		8935	<5.0	(7		05/03/2006
Methylene chloride		8935	<5.0	ug/L ug/L		05/03/2006
4-Methyl-2-pentanone (MIBK)		8935	<12.5	ug/L ug/L		05/03/2006
Styrene		8935	<1.0	ug/L ug/L		
1,1,1,2-Tetrachloroethane		8935	<1.0	ug/L		05/03/2006
1,1,2,2-Tetrachloroethane		8935	<1.0	ug/L		05/03/2006
Tetrachloroethene		8935	<1.0	ug/L ug/L		05/03/2006
Toluene		8935	<1.0	ug/L ug/L		05/03/2006
			<1.0	_		05/03/2006
1,1,1-Trichloroethane 1,1,2-Trichloroethane		8935	<1.0	ug/L		05/03/2006
		8935		ug/L		
Trichloroethene		8935	<1.0	ug/L		05/03/2006
Trichlorofluoromethane		8935	<1.0	ug/L		05/03/2006
1,2,3-Trichloropropane		8935	<\$.0	ug/L		05/03/2006
Vinyl acetate		8935	<5.0	ug/L		05/03/2006
Vinyl chloride		8935	<1.0	ug/L		05/03/2006
Xylenes, Total		8935	<2.0	ug/L		05/03/2006
Surr: 1,2-Dichloroethane-d4		8935	96	*		05/03/2006
Surr: Dibromofluoromethane		8935	94	*		05/03/2006
Surr: Toluene-d8		8935	97	1		05/03/2006
Surr: 4-Bromofluorobenzene		8935	93	*		05/03/2006
VOLATILE COMPOUNDS - 8260 (AQ)						
Acetone		8944	<20.0	ug/L		05/05/2006
Acrylonitrile		8944	<50.0	ug/L		05/05/2006
Benzene		8944	<1.0	ug/L		05/05/2006
Bromochloromethane		8944	<1.0	ug/L		05/05/2006
Bromodichloromethane		8944	<1.0	ug/L		05/05/2006
Bromoform		8944	<1.0	ug/L		05/05/2006
2-Butanone (MEK)		8944	<12.5	ug/L		05/05/2006
Carbon disulfide		8944	<1.0	ug/L		05/05/2006
Carbon tetrachloride		8944	<1.0	ug/L		05/05/2006
Chlorobenzene		8944	<1.0	ug/L		05/05/2006
Chloroethane		8944	<5.0	ug/L		05/05/2006
Chloroform		8944	<1.0	ug/L		05/05/2006
Chloromethane		8944	<5.0	ug/L		05/05/2006
Dibromochloromethane		8944	<1.0	ug/L		05/05/2006
Dibromomethane		8944	<1.0	ug/L		05/05/2006
1,2-Dibromo-3-chloropropane		8944	<5.0	ug/L		05/05/2006
1,2-Dibromoethane (EDB)		8944	<5.0	ug/L		05/05/2006
1,2-Dichlorobenzene		8944	<1.0	ug/L		05/05/2006



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Job Number: 06.07489 Report Date: 05/08/2006 Page: 18 of 22

	Prep	Run				
	Batch	Batch	Blank		Date	Date
Analyte	Number	Number	Result	Units	Prepped	Analyzed
1,4-Dichlorobenzene		8944	<1.0	ug/L		05/05/2006
trans-1,4-Dichloro-2-butene		8944	<5.0	ug/L		05/05/2006
1,1-Dichloroethane		8944	<1.0	ug/L		05/05/2006
1,2-Dichloroethane		8944	<1.0	ug/L		05/05/2006
1,1-Dichloroethene		8944	<1.0	ug/L		05/05/2006
cis-1,2-Dichloroethene		8944	<1.0	ug/L		05/05/2006
trans-1,2-Dichloroethene		8944	<1.0	ug/L		05/05/2006
1,2-Dichloropropane		8944	<1.0	ug/L		05/05/2006
cis-1,3-Dichloropropene		8944	<1.0	ug/L		05/05/2006
trans-1,3-Dichloropropene		8944	<1.0	ug/L		05/05/2006
Ethylbenzene		8944	<1.0	ug/L		05/05/2006
Hexachlorobutadiene		8944	<5.0	ug/L		05/05/2006
2-Hexanone		8944	<12.5	ug/L		05/05/2006
Iodomethane (Methyl Iodide)		8944	<5.0	ug/L		05/05/2006
Bromomethane		8944	<5.0	ug/L		05/05/2006
Methylene chloride		8944	<5.0	ug/L		05/05/2006
4-Methyl-2-pentanone (MIBK)		8944	<12.5	ug/L		05/05/2006
Styrene		8944	<1.0	ug/L		05/05/2006
1,1,1,2-Tetrachloroethane		8944	<1.0	ug/L		05/05/2006
1,1,2,2-Tetrachloroethane		8944	<1.0	ug/L		05/05/2006
Tetrachloroethene		8944	<1.0	ug/L		05/05/2006
Toluene		8944	<1.0	ug/L		05/05/2006
1,1,1-Trichloroethane		8944	<1.0	ug/L		05/05/2006
1,1,2-Trichloroethane		8944	<1.0	ug/L		05/05/2006
Trichloroethene		8944	<1.0	ug/L		05/05/2006
Trichlorofluoromethane		8944	<1.0	ug/L		05/05/2006
1,2,3-Trichloropropane		8944	<5.0	ug/L		05/05/2006
Vinyl acetate		8944	<5.0	ug/L		05/05/2006
Vinyl chloride		8944	<1.0	ug/L		05/05/2006
Xylenes, Total		8944	<2.0	սց/Ն		05/05/2006
Surr: 1,2-Dichloroethane-d4		8944	109	4		05/05/2006
Surr: Dibromofluoromethane		8944	93	4		05/05/2006
Surr: Toluene-d8		8944	99	ŧ		05/05/2006
Surr: 4-Bromofluorobenzene		8944	96	4		05/05/2006
VOLATILE COMPOUNDS - 8260 (AO)						
Acetone		8945	<20.0	ug/L		05/05/2006
Acrylonitrile		8945	<50.0	ug/L		05/05/2006
Benzene		8945	<1.0	ug/L		05/05/2006
Bromochloromethane		8945	<1.0	ug/L		05/05/2006
			-2.0	در روب		25, 55, 2000



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Job Number: 06.07489 Report Date: 05/08/2006 Page: 19 of 22

	Prep	Run				
	Batch	Batch	Blank		Date	Date
Analyte	Number	Number	Result	Units	Prepped	Analyzed
Bromodichloromethane		8945	<1.0	ug/L		05/05/2006
Bromoform		8945	<1.0	ug/L		05/05/2006
2-Butanone (MEK)		8945	<12.5	ug/L		05/05/2006
Carbon disulfide		8945	.<1.0	սց/Ն		05/05/2006
Carbon tetrachloride		8945	<1.0	ug/L		05/05/2006
Chlorobenzene		8945	<1.0	ug/L		05/05/2006
Chloroethane		8945	<5.0	ug/L		05/05/2006
Chloroform		8945	<1.0	ug/L		05/05/2006
Chloromethane		8945	<5.0	ug/L		05/05/2006
Dibromochloromethane		8945	<1.0	ug/L		05/05/2006
Dibromomethane		8945	<1.0	ug/L		05/05/2006
1,2-Dibromo-3-chloropropane		8945	<5.0	ug/L		05/05/2006
1,2-Dibromoethane (EDB)		8945	<5.0	ug/L		05/05/2006
1,2-Dichlorobenzene		8945	<1.0	ug/L		05/05/2006
1,4-Dichlorobenzene		8945	<1.0	ug/L		05/05/2006
trans-1,4-Dichloro-2-butene		8945	<5.0	ug/L		05/05/2006
1,1-Dichloroethane		8945	<1.0	ug/L		05/05/2006
1,2-Dichloroethane		8945	<1.0	ug/L		05/05/2006
1,1-Dichloroethene		8945	<1.0	ug/L		05/05/2006
cis-1,2-Dichloroethene		8945	<1.0	ug/L		05/05/2006
trans-1,2-Dichloroethene		8945	<1.0	ug/L		05/05/2006
1,2-Dichloropropane		8945	<1.0	ug/L		05/05/2006
cis-1,3-Dichloropropene		8945	<1.0	ug/L		05/05/2006
trans-1,3-Dichloropropene		8945	<1.0	ug/L		05/05/2006
Ethylbenzene		8945	<1.0	ug/L		05/05/2006
Hexachlorobutadiene		8945	<5.0	ug/L		05/05/2006
2-Hexanone		8945	<12.5	ug/L		05/05/2006
Iodomethane (Methyl Iodide)		8945	<5.0	ug/L		05/05/2006
Bromomethane		8945	<5.0	ug/L		05/05/2006
Methylene chloride		8945	<5.0	ug/L		05/05/2006
4-Methyl-2-pentanone (MIBK)		8945	<12.5	ug/L		05/05/2006
Styrene		8945	<1.0	ug/L		05/05/2006
1,1,1,2-Tetrachloroethane		8945	<1.0	ug/L		05/05/2006
1,1,2,2-Tetrachloroethane		8945	<1.0	ug/L		05/05/2006
Tetrachloroethene		8945	<1.0	ug/L		05/05/2006
Toluene		8945	<1.0	υg/L		05/05/2006
1,1,1-Trichloroethane		B945	<1.0	ug/L		05/05/2006
1,1,2-Trichloroethane		8945	<1.0	ug/L		05/05/2006
Trichloroethene		8945	<1.0	ug/L		05/05/2006
				-		



Michael Akins BURGESS & NIPLE LANDFILL 5085 Reed Rd. Columbus, OH 43220

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	Prep	Run Batch	Blank		Date	Date
	Batch					
Analyte	Number	Number	Result	Units	Prepped	Analyzed
Trichlorofluoromethane		8945	<1.0	ug/L		05/05/2006
1,2,3-Trichloropropane		8945	<5.0	ug/L		05/05/2006
Vinyl acetate		8945	<5.0	ug/L		05/05/2006
Vinyl chloride		8945	<1.0	ug/L		05/05/2006
Xylenes, Total		8945	<2.0	ug/L		05/05/2006
Surr: 1,2-Dichloroethane-d4		B945	102	1		05/05/2006
Surr: Dibromofluoromethane		8945	95	*		05/05/2006
Surr: Toluene-d8		B 94 5	96	*		05/05/2006
Surr 4-Bromofluorobenzene		8945	94	4		05/05/2006



### **Quality Control Report Laboratory Control Standard**

Michael Akins BURGESS & NIPLE LANDFILL 5085 Reed Rd. Columbus, OH 43220

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	Prep	Run		LCS	LCS	LCS
	Batch	Batch	Date	True	Conc	•
Analyte	No.	No.	Analyzed	Conc	Found	Rec.
Sodium, ICP	5429	5931	04/28/2006	21.0	21.4	102
VOLATILE COMPOUNDS - 8260 (AQ)						
Benzene		8935	05/03/2006.	.200.	23.7	118
Chlorobenzene		8935	05/03/2006	20.0	19.1	96
1,1-Dichloroethene		8935	05/03/2006	20.0	19.6	98
Ethylbenzene		8935	05/03/2006	20.0	20.0	100
Toluene		8935	05/03/2006	20.0	19.5	98
Trichloroethene		8935	05/03/2006	20.0	19.6	98
Xylenes, Total		8935	05/03/2006	60.0	61.7	103
Surr: 1,2-Dichloroethane-d4		8935	05/03/2006	100	110	110
Surr: Dibromofluoromethane		8935	05/03/2006	100	94	94
Surr: Toluene-d8		8935	05/03/2006	100	97	97
Surr: 4-Bromofluorobenzene		B935	05/03/2006	100	98	98
VOLATILE COMPOUNDS - 8260 (AQ)						
Benzene		8944	05/05/2006	20.0	26.1	130
Chlorobenzene		8944	05/05/2006	20.0	21.5	108
1,1-Dichloroethene		8944	05/05/2006	20.0	21.5	108
Ethylbenzene		8944	05/05/2006	20.0	22.0	110
Toluene		8944	05/05/2006	20.0	22.1	110
Trichloroethene		B 944	05/05/2006	20.0	21.9	110
Xylenes, Total		8944	05/05/2006	60.0	67.6	113
Surr: 1,2-Dichloroethane-d4		8944	05/05/2006	100	111	111
Surr: Dibromofluoromethane		8944	05/05/2006	100	91	91
Surr: Toluene-d8		8944	05/05/2006	100	97	97
Surr: 4-Bromofluorobenzene		B944	05/05/2006	100	99	99
VOLATILE COMPOUNDS - 8260 (AQ)						
Benzene		8945	05/05/2006	20.0	22.8	114
Chlorobenzene		8945	05/05/2006	20.0	18.7	94
1,1-Dichloroethene		8945	05/05/2006	20.0	19.4	97
Ethylbenzene		8945	05/05/2006	20.0	19.4	97
Toluene		8945	05/05/2006	20.0	19.4	97
Trichloroethene		8945	05/05/2006	20.0	18.8	94
Xylenes, Total		8945	05/05/2006	60.0	59.9	100
Surr: 1,2-Dichloroethane-d4		8945	05/05/2006	100	114	114
Surr: Dibromofluoromethane		8945	05/05/2006	100	93	93
Surr: Toluene-d8		8945	05/05/2006	100	96	96
Surr: 4-Bromofluorobenzene		8945	05/05/2006	100	95	95



### **Quality Control Report** Matrix Spike/Matrix Spike Duplicate

Michael Akins BURGESS & NIPLE LANDFILL 5085 Reed Rd. Columbus, OH 43220

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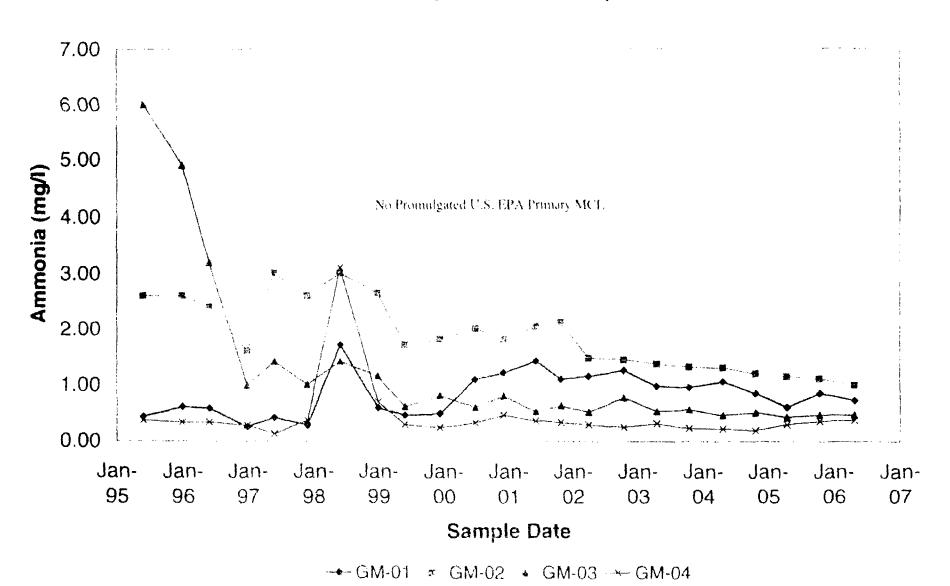
Matrix Spike/Matrix Spike Duplicate Samples may not be samples from this job.

		Prep	Run	MS	MSD		
	Sample	Batch	Batch	ŧ	*		
Analyte	Number	Number	Number	Rec.	Rec.	RPD	Flags
Chloride	193546		1367	108	105	1.9	
COD	193919		7565	120	115	2.7	
COD	192603		7566	97	99	0.9	
Nitrogen, Ammonia Direct	193198		2152	84	84	0.0	
Sodium, ICP	193918	5429	5931	97	94	1.2	
VOLATILE COMPOUNDS - 8260 (AQ)	194779						
Benzene	194779		8944	148	125	17	i
Chlorobenzene	194779		8944	120	100	16	
1,1-Dichloroethene	194779		8944	125	105	17	
Trichloroethene	194779		8944	135	105	25	
VOLATILE COMPOUNDS - 8260 (AQ)	195270						
Benzene	195270		8945	115	110	4.4	
Chlorobenzene	195270		8945	95	85	11	
1.1-Dichloroethene	195270		8945	105	95	10	
Ethylbenzene	195270		8945	100	90	11	
Toluene	195270		8945	105	95	10	
Trichloroethene	195270		8945	100	90	11	
Xylenes, Total	195270		8945	105	93	12	

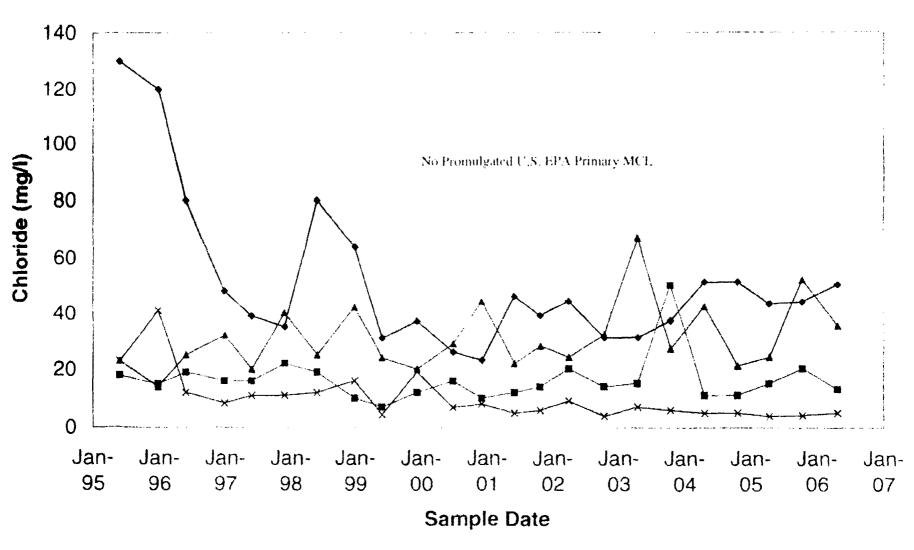
i - MS and MSD recoveries outside of control limits.

# ATTACHMENT 3 TIME-VERSUS-CONCENTRATION PLOTS

# Ammonia Groundwater Concentrations WRR Facility, Columbia City, IN

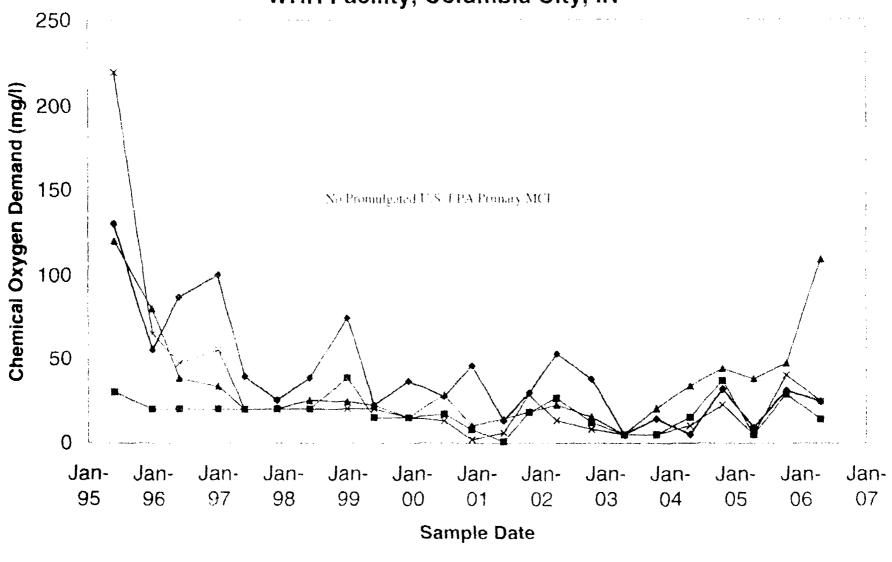


# Chloride Groundwater Concentrations WRR Facility, Columbia City, IN



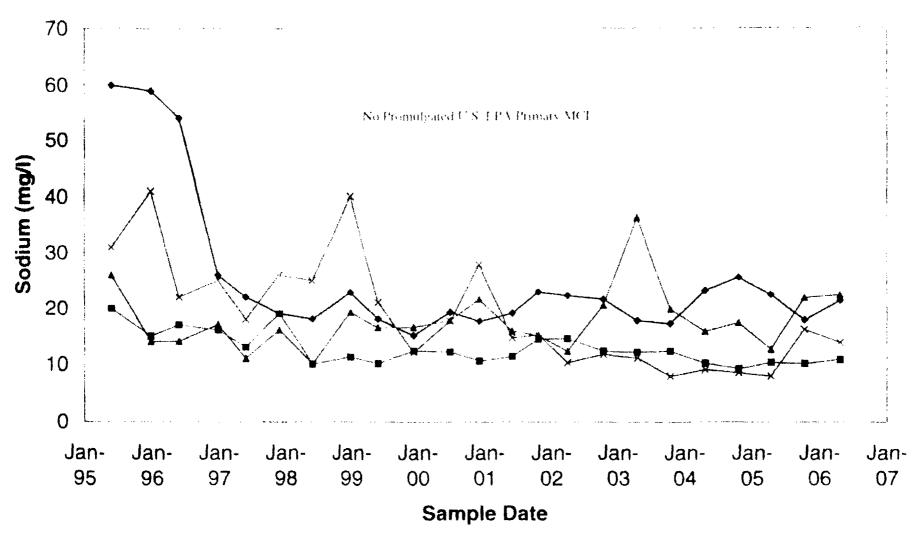
→ GM-01 → GM-02 → GM-03 → GM-04

# Chemical Oxygen Demand Groundwater Concentrations WRR Facility, Columbia City, IN



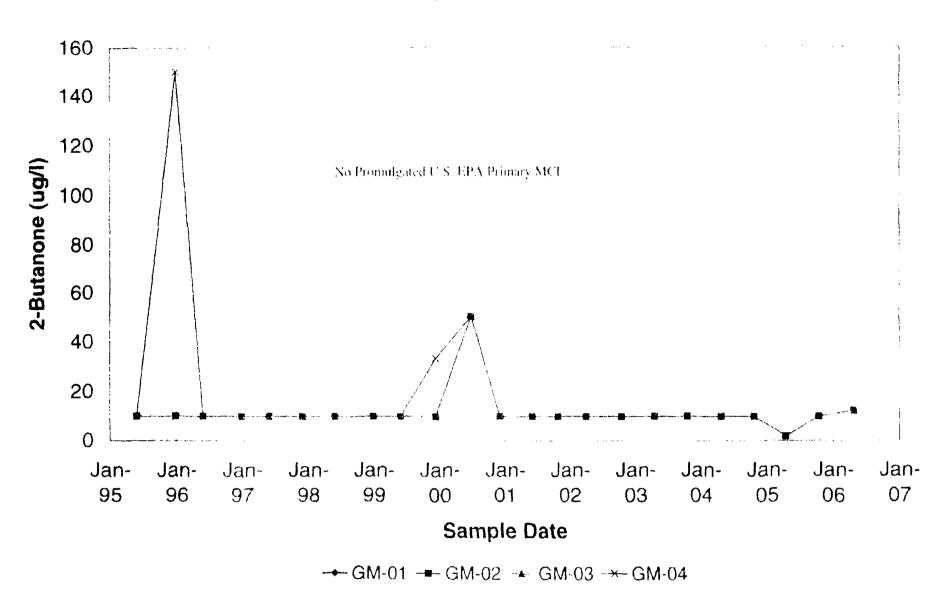
→ GM-01 · GM-02 · GM-03 · GM-04

# Sodium Groundwater Concentrations WRR Facility, Columbia City, IN

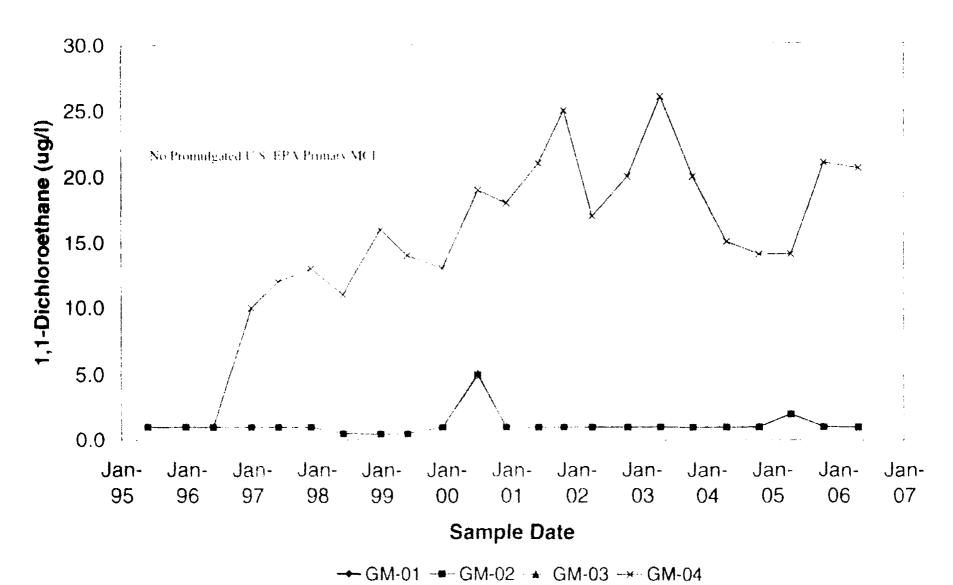


→ GM-01 · • · GM-02 · • · GM-03 · · · · GM-04

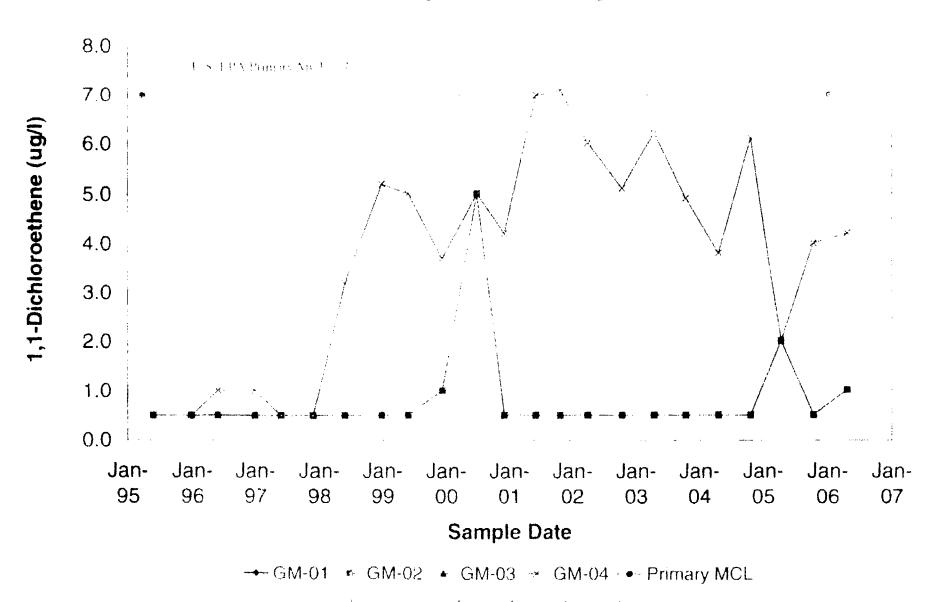
# 2-Butanone (MEK) Groundwater Concentrations WRR Facility, Columbia City, IN

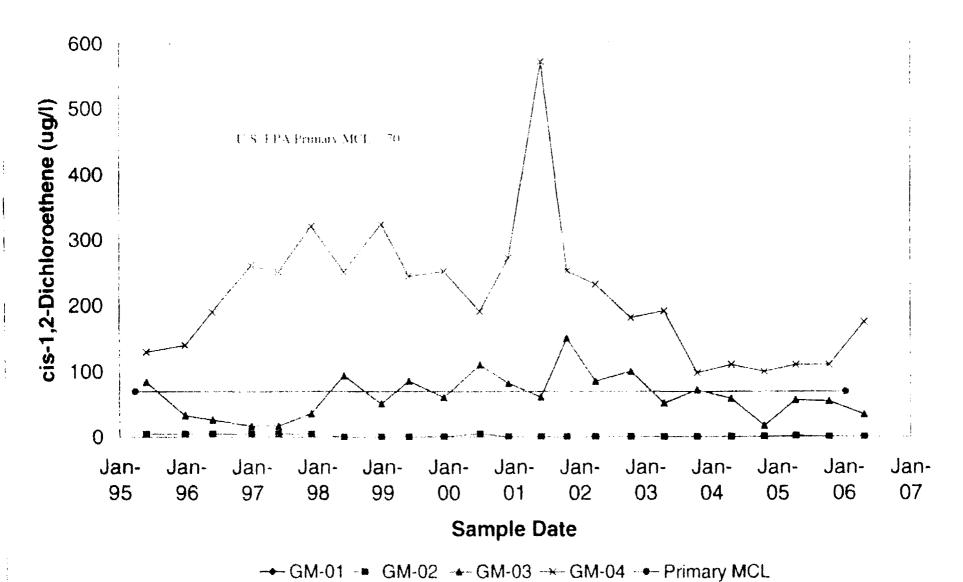


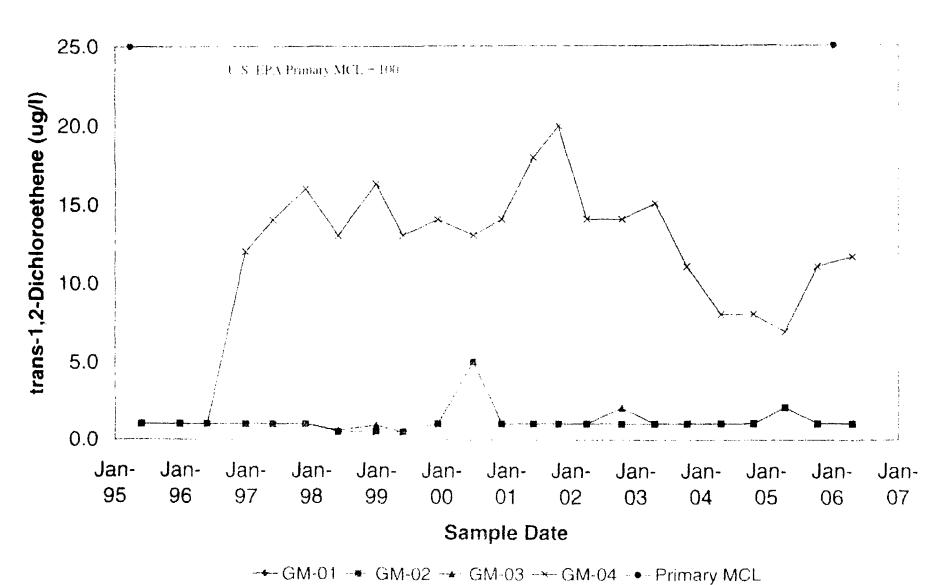
# 1,1-Dichloroethane Groundwater Concentrations WRR Facility, Columbia City, IN



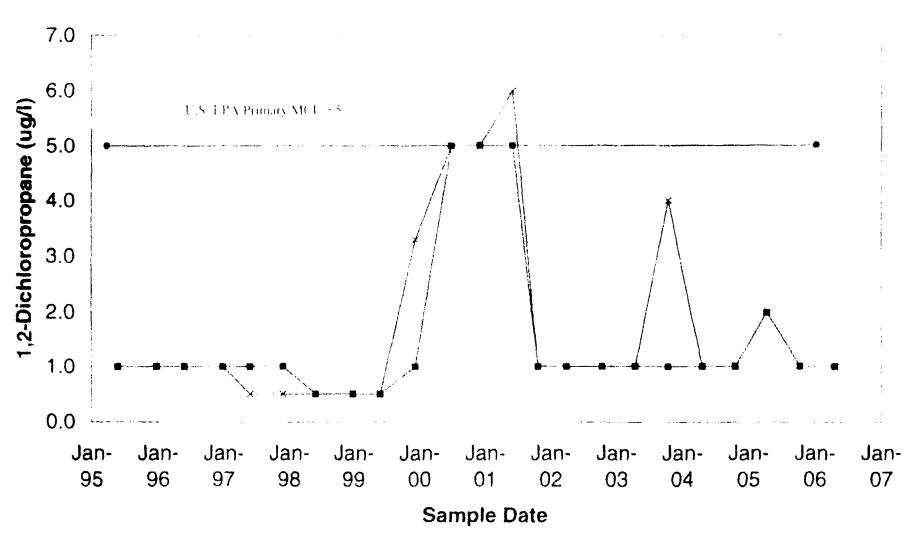
# 1,1-Dichloroethene Groundwater Concentrations WRR Facility, Columbia City, IN





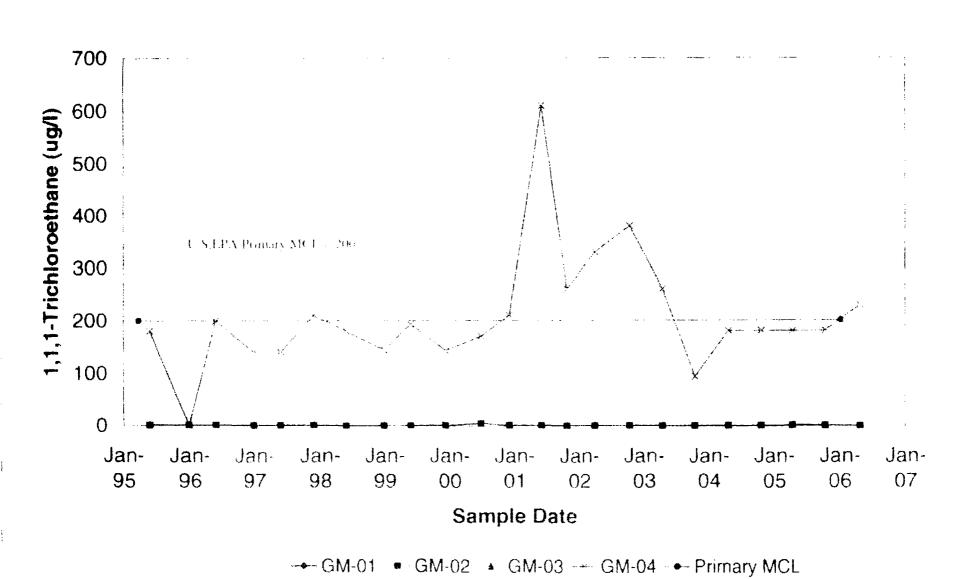


# 1,2-Dichloropropane Groundwater Concentrations WRR Facility, Columbia City, IN

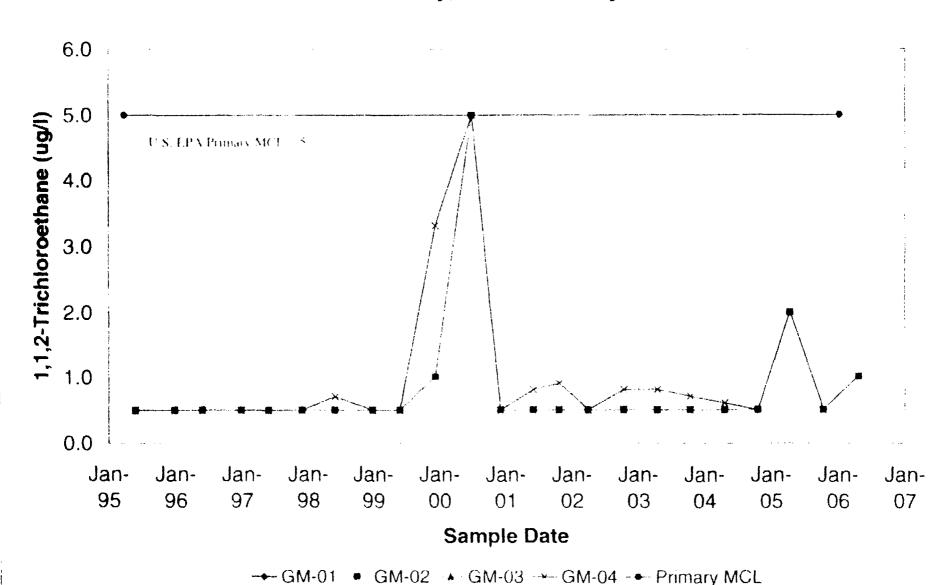


→ GM-01 • GM-02 • GM-03 • GM-04 • Primary MCL

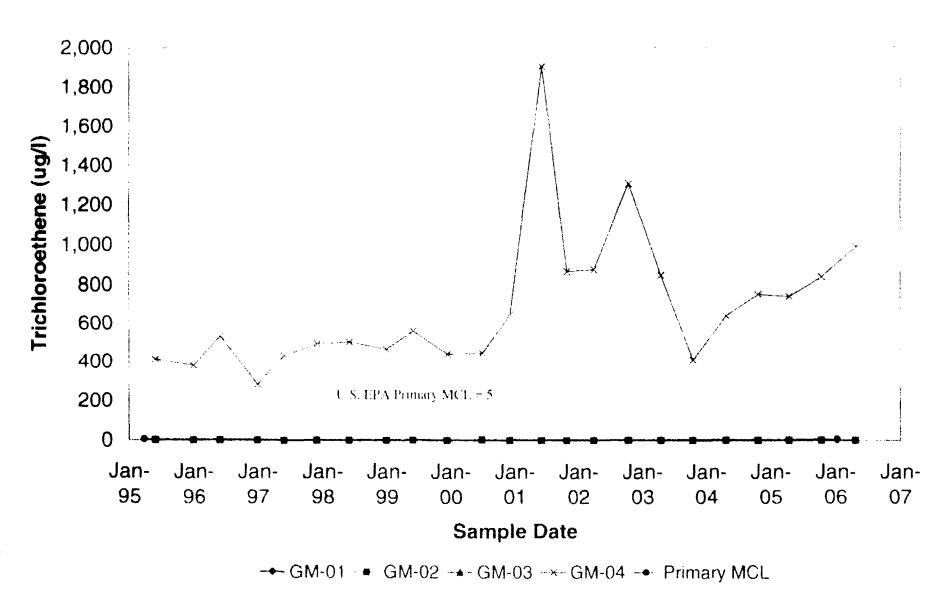
# 1,1,1-Trichloroethane Groundwater Concentrations WRR Facility, Columbia City, IN



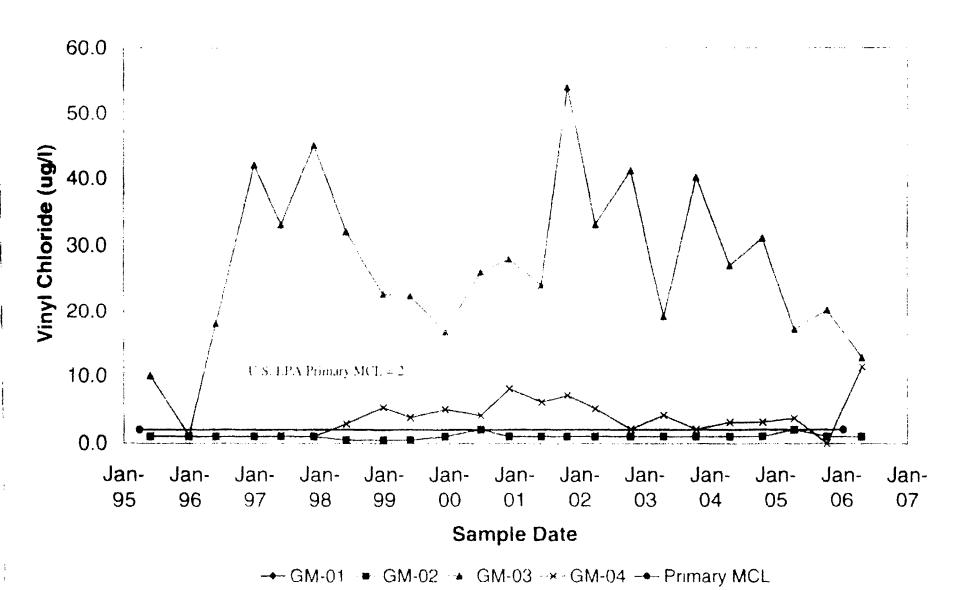
# 1,1,2-Trichloroethane Groundwater Concentrations WRR Facility, Columbia City, IN



# Trichloroethene Groundwater Concentrations WRR Facility, Columbia City, IN



# Vinyl Chloride Groundwater Concentrations WRR Facility, Columbia City, IN



APPENDIX B

DATA VALIDATION REPORT

#### APPENDIX B

# DATA VALIDATION REPORT SEMI-ANNUAL PROGRESS REPORT 22 JANUARY THROUGH JUNE 2006

#### **July 2006**

#### Wayne Reclamation & Recycling

Groundwater, air, and associated quality control (QC) samples were collected from the Wayne Reclamation & Recycling Site in Columbia City, Indiana between January and June 2006. The water samples were analyzed by Pace Analytical Services, Inc. (Pace) of Indianapolis, Indiana for one or more of the following parameters: volatile organic compounds (VOCs) by United States Environmental Protection Agency (U.S. EPA) Method SW-846 8260B; dissolved metals (arsenic, barium, cadmium, chromium, lead, nickel, and zinc) by U.S. EPA Method SW-846 6010B; and total cyanide by U.S. EPA Method 335.3. Additionally, air samples were analyzed for VOCs by Pace of Minneapolis, Minnesota by U.S. EPA Method TO-14.

Laboratory analytical results were evaluated in accordance with the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic Data Review (October 1999), U.S. EPA CLP NFG for Inorganic Data Review (October 2004), and the laboratory-specific quality control parameters for each analytical methods. The analytical data were reviewed and qualified based on the results of the data evaluation parameters and/or the QC sample results provided by the laboratory.

The following summarizes the review of the analytical data that did not meet the QC criteria per sample delivery group (SDG):

SDG 1030427: The laboratory indicated that the initial calibration (IC) associated with the VOC analysis of air samples SVE-G was outside the control limits. The following compounds were qualified as estimated (J): cis-1,2-dichloroethene.

For the LCS associated with this SDG, the percent recovery for dichlorodifluoromethane (144%) exceeded the control limits. Because this compound was not detected in the associated samples, qualifiers were not necessary

SDG 1031449: The laboratory indicated that the initial calibration (IC) associated with the VOC analysis of air samples AIREFF-FIELD DUP, EQUIPMENT BLANK-AIR, and AIR EFF (REANALYSIS) was outside the control limits. The following compounds were qualified as estimated (J): methylene chloride; and 1,1,2-trichlorotrifluoroethane.

THC was detected in the method blank associated with this SDG. Because the THC sample results were less than five times the method blank concentration (considering the dilution factor), the THC sample results were qualified as non-detect (U).

For samples AIREFF-FIELD DUP and AIR EFF (REANALYSIS), the 1,2-cis-dichloroethene results exceeded the calibration range. These results are considered estimated (J).

SDG 1032720: THC was detected in the method blank associated with this SDG. Because the THC sample result was less than five times the method blank concentration (considering the dilution factor), the THC sample result was qualified as non-detect (U).

For samples AIREFF, the 1,2-cis-dichloroethene result exceeded the calibration range. This result is considered estimated (J).

SDG 1032719: THC was detected in the method blank associated with this SDG. Because the THC sample result was less than five times the method blank concentration (considering the dilution factor), the THC sample result was qualified as non-detect (U).

SDG 1033103: THC was detected in the method blank associated with this SDG. Because the THC sample results were less than five times the method blank concentration (considering the dilution factor), the THC sample results were qualified as non-detect (U).

SDG 5052705: For the LCS associated with this SDG, the following compounds had percent recoveries below the control limits: 1,2-dichloroethane; trans-1,2-dichloropropene; and

cis-1,2-dichloropropene. Therefore, the associated sample results were qualified as estimated (J).

SDG 5052714: For the LCS associated with this SDG, the percent recovery for dichlorodifluoromethane (161%) exceeded the control limits. Because this compound was not detected in the associated samples, qualifiers were not necessary.

SDG 5053303: The following compounds were detected in the method blank associated with the samples this SDG: in 1.2.4-trichlorobenzene: hexachloro-1,3-butadiene; and 1.2.3-trichlorobenzene. Because these compounds were not detected in the investigative samples, qualifiers were not necessary.

SDG 5053872: Methylene chloride was detected in the method blank associated with the samples in this SDG. Because this compound was not detected in the investigative samples, qualifiers were not necessary.

For the VOC matrix spike/matrix (MS/MSD) spike duplicate analyses, the relative percent differences (RPDs) exceeded the control limit. Because the MS/MSD percent recoveries were acceptable, qualifiers were not necessary.

The MSD percent recovery for ethylbenzene was below the control limits. Because the MS percent recovery and the LCS analysis were acceptable, qualifiers were not necessary.

SDG 1033948: The cis-1,2-dichloroethene result for sample AIREFF exceeded the calibration range and is therefore considered estimated.

Based on the results of this data validation, all data are considered valid and complete as qualified.

\\Usdet\\S02\U:\jobs\\01\_\INDUSTR\IAL-OTHER\\3868-Wayne\ RR\\06-2004-07\ OM&M\\6 - Reports\Semi-Annual\ Progress\ Reports\SAPR#22-Jan-June\ 2006\Appendices\Appendix\ B\ - data\ valid\ rpt-\ Wayne\ Rec\ July\ 2006\.doc\

SUMMARY OF MAJOR FIELD ACTIVITIES
JANUARY THROUGH JUNE 2006

## SUMMARY OF MAJOR FIELD ACTIVITIES JANUARY THROUGH JUNE 2006

### Wayne Reclamation & Recycling

Date	Description of Field Activities and Events as Provided by InSite
January 2006	<ul> <li>Drain knock out tank. Read RW-3,5 flow meters. Clean flow meter paddles.</li> <li>Flow calculations due to flow totalizer skip.</li> <li>SE area water levels. Pumped down dry sump. Installed 'T' on AC-1 pressure line. Blow down force main.</li> <li>Routine maintenance. Collect air sample. SE area ground water levels. Blow force main to POTW.</li> <li>Routine maintenance. Blow down SE area collection line with aggregate. Check fence.</li> <li>Modify watchdog setup. Blow down SE area collection line. Miscellaneous minor maintenance. Security check.</li> <li>Routine maintenance. Collect samples. Drop off samples for shipping.</li> <li>Routine maintenance. Mix anti-scale.</li> <li>Routine maintenance. Meet with fence contractor. Unload chemical delivery. Take RW 3 and 5 flows and totals. Work on AC-1 check valve.</li> <li>Routine maintenance. Clean blower filter.</li> </ul>
February 2006	<ul> <li>Routine maintenance. Mix anti-scale. Clean flow meter. Adjust air flow through stripper.</li> <li>Sample air and ground water. Calibrate SE area Signet flow meter to effluent. SE area water levels. Blow down force main to POTW. Miscellaneous operation.</li> <li>Clean blower filters.</li> <li>Mix anti-scale chemical.</li> </ul>

## SUMMARY OF MAJOR FIELD ACTIVITIES JANUARY THROUGH JUNE 2006

### Wayne Reclamation & Recycling

Date	Description of Field Activities and Events as Provided by InSite (cont.)
March 2006	Routine maintenance. Read flow meters. Clean paddles.
	Routine maintenance. Mix anti-scale chemicals.
	<ul> <li>Load tractor. Routine maintenance Swap pumps at RW-3, 4 and 5. Blow down AST an SE area collection lines.</li> </ul>
	<ul> <li>Routine maintenance. Build pump that was soaking. Start soaking another pump. RW-3 and 5 flows.</li> </ul>
	<ul> <li>Routine maintenance. Clean blower filter. Build pump that was soaking from RW-5.</li> <li>Mix anti-scale. Blow down force main and SE area collection line.</li> </ul>
	<ul> <li>Routine maintenance. Pulled RW-9 and changed out pump. Blew down force main and collection line from RW-9.</li> </ul>
	Routine maintenance. Read flow meters. Clean paddles.
	Routine maintenance. Mix anti-scale.
	<ul> <li>Load tractor. Routine maintenance. Swap pumps at RW-3, 4 &amp; 5. Blow down AST and SE area collection lines.</li> </ul>
	<ul> <li>Routine maintenance. Build pump that was soaking. Start soaking another pump. RW- and 5 flows.</li> </ul>
	<ul> <li>Routine maintenance. Clean blower filter. Build pump that was soaking from RW-5.</li> <li>Mix anti-scale. Blow down force main and SE area collection line.</li> </ul>
	<ul> <li>Routine maintenance. Pulled RW-9 and changed out pump. Blow down force main and collection line from RW-9.</li> </ul>
April 2006	Routine maintenance. Check inf. air with PID.
-	• Routine maintenance. RW-3 and 5 flows.
	Routine maintenance. Clean bathroom. Anti-scale delivery drop-off.
	• Load 4-wheeler. Routine maintenance. Water levels.
	Sampling.

## SUMMARY OF MAJOR FIELD ACTIVITIES JANUARY THROUGH JUNE 2006

### Wayne Reclamation & Recycling

Date	Description of Field Activities and Events as Provided by InSite (cont.)
May 2006	<ul> <li>Routine maintenance. Check knockout tank for water (none found).</li> <li>Routine maintenance. Plant not stripping.</li> <li>Routine maintenance. Drain knockout tank, unplug citric pump, adjust air flow.</li> <li>Routine maintenance. Dialed in plant, cleaned pitots.</li> <li>Routine maintenance. Changed filter in blower 1.</li> <li>Routine maintenance. Checked SE area sump, checked motor (worn bearing at fan end</li> </ul>
	<ul> <li>and replaced flex element in influent pump 1.</li> <li>Routine maintenance. Trim transmitter for FT-3.</li> </ul>

June 2006

Routine maintenance. Blow down force main to POTW. Installed new overload heaters at RW-5. Removed, cleaned and reset pumps at RW-3 snf RW-4.

### APPENDIX D

MARY OF AIR DISPERSION MODELING AND CUMULATIVE CANCER RISK CALCULATIONS

#### APPENDIX D

## SUMMARY OF AIR DISPERSION MODELING AND CUMULATIVE CANCER RISK CALCULATIONS

#### Wayne Reclamation & Recycling

The following summarizes the air modeling conducted by MWH Americas, Inc. for the Wayne Reclamation & Recycling (WRR) site in Columbia City, Indiana to assess the maximum annual average ground-level concentration (GLC) that could occur at any point outside the perimeter of the WRR site. Descriptions of the model, modeling procedures, and the results are provided below.

#### AIR DISPERSION MODELING PROCEDURES

The modeling was performed by utilizing the United States Environmental Protection Agency (U.S. EPA) model Industrial Source Complex – Long-Term (ISC-LT) to evaluate the ambient air impact of emissions from the site. Dispersion modeling was conducted on both the air treatment system influent and effluent in order to compare the risks associated with both treated and untreated air.

#### **Meteorological Data**

Meteorological data from 1985 was entered into the model for the Columbia City, Indiana region. Model output is highly sensitive to such data, as changes in atmospheric conditions will directly affect the ability of a discharged pollutant to disperse in the surrounding air. Meteorological data such as wind speed, wind direction, urban and rural mixing heights, Pasquill Stability Classifications (rated A to G, with G being the most stable), and ambient air temperature were converted into a binary data package. The package was then loaded into the ISC-LT model. The model then evaluated these conditions with the remaining model input parameters to identify which combinations of these conditions would result in maximum GLC of pollutants.

#### **Emissions Source Data**

The following data represents the emissions parameters at the WRR site that were entered into the model:

Stack Height 9.1 meters

Stack Diameter 0.4064 meters

Stack Base Elevation 6.1 meters

Exhaust Temperature 73° C

Gas Exit Velocity 13.08 meters per second
Volumetric Flow Rate 1.7 cubic meters per second

Influent/Effluent Concentrations Sampling events (See Table 14, Progress Rpt. 3.

Current data is provided in Table 13 of this

report.)

Terrain Flat
Dispersion Coefficients Rural
Final Plume Rise On
Stack-tip Downwash On

Receptor Height 0 meters

#### **Modeling Procedure**

A grid was established to describe the relationship of the emission source with its surroundings, including the location of the site boundaries and any potential receptors. A cartesian grid was established around the site to determine GLC locations.

#### **HUMAN HEALTH RISK ASSESSMENT**

The maximum concentrations determined by the air modeling study were multiplied by unit risk factors (URFs) to obtain the excess carcinogenic risk posed by the emissions through the inhalation route. The URFs used in this study were developed from toxicity values included in U.S. EPA's Integrated Risk Information System (IRIS), U.S. EPA's "Health Assessment Summary Tables" (HEAST, Annual FY-1995), and information provided by the U.S. EPA Environmental Criteria Assessment Office. The URFs assume a chronic exposure to the carcinogenic chemicals for 24 hours a day, 365 days a year, for 70 years. The URFs for the constituents of concern are:

Vinyl chloride - 7.80E-05 1,1-Dichloroethane - 1.63E-08 Trichloroethene - 2.00E-06 Tetrachloroethene - 5.90E-06 The excess cancer risk (ECR) to the maximally exposed individual can be calculated by multiplying the URF by the ambient concentration of the chemical in question. In a residential zone, the maximally-exposed individual is assumed to be continuously exposed to the chemical for 70 years.

The maximum individual excess cancer risk (MICR) to the maximally-exposed individual due to air toxic emissions from the WRR site was calculated by multiplying the appropriate risk factor (URF) by the maximum annual GLC at the maximally-exposed individual:

$$MICR = URF * GLC$$

A summary of these calculations using concentrations generated from the model output is provided in Table 14 of Progress Report 3, and current calculations are provided in Table 14 of this progress report. An example model input/output is attached.

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On June 24, 1999, air treatment was discontinued; however, monthly air sampling continues to be conducted on the effluent air stream as a means of monitoring potential risk levels associated with the untreated air stream. Effluent air sampling conducted since discontinuation of air treatment indicates the 1x10-6 action level has not been exceeded, with one minor exception of August 2005 (exceeded by 0.05x10-6). This was due to a slight increase in the vinyl chloride concentration noted in the system effluent air stream during that month's sampling.

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